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Vol. 47.

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Science in Horticulture

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Seasonable Orchard Work

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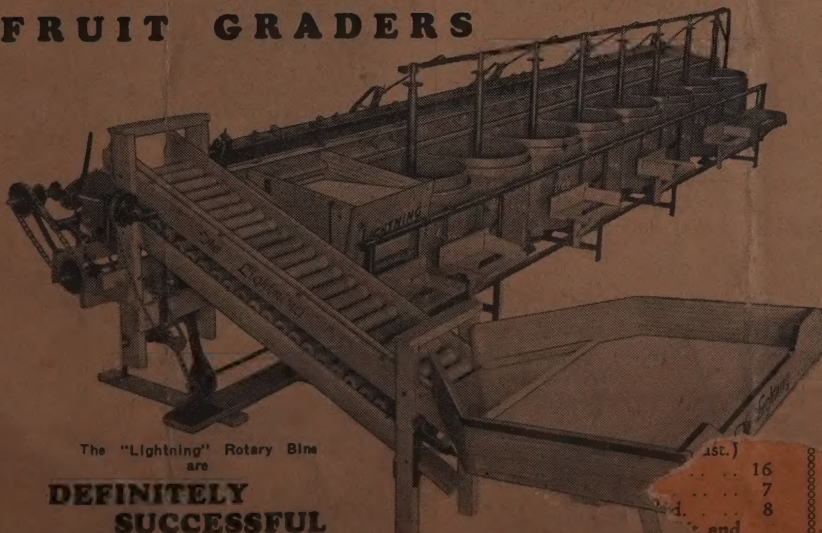
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bushes last season. The harvest lighter than last year: the estimate for a crop of 71,000 bushels as compared with 118,079 in 1944.

On the other hand the anticipated citrus crop of 411,000 bushels heavier than the crop of 300,000 bushels vested in 1944.

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Western Australian News and Notes

(By Our Correspondent.)

NEW season's Apples are now arriving in increasing quantities and selling readily up to ceiling prices. Pears are coming forward freely, Bartletts and Clapps both being in good demand. Oranges are scarce, as are Strawberries, while only about one-third of the usual supply of Carnarvon Bananas are coming to hand. Nectarines and Peaches are plentiful, and there is a glut of Plums. Rock Melons and Grapes are also being heavily supplied. Passionfruit are more plentiful, and prices are lower. Tomatoes are coming to hand so freely that hundreds of cases are going to factories at from 1/6 a case. In fact, thousands are being allowed to rot on the ground in suburban market-gardens, a state of affairs which Market Gardeners' Association secretary, Mountjoy, says could easily be avoided if nightly broadcasts could be given informing growers of the expected demand at the coming morning's market.

Maximum prices of Lemons has been increased slightly, 96 to bushel now being 16/- wholesale and 2/6 dozen retail, down to 240's at 25/- and 1/8 per dozen.

The Superintendent of Horticulture (Mr. H. R. Powell) estimates the year's crop as follows: Apples lighter at 1,267,600 bushels (Jonathans, 144,000; Cleopatras, 284,000; Dunns, 135,000; Delicious, 21,100; Rokewoods, 44,000; Granny Smith, 438,000; Yates, 130,500; Doherty, 21,000; others, 50,000 bushels). Pears lighter at 71,000 bushels (Bartletts, 18,000; Packhams, 8,000; others, 45,000 bushels).

Under-Secretary of Agriculture (Mr. G. K. Baron-Hay) states that as some early varieties of Apples and Pears were being made exempt from the provisions of the Apple and Pear Acquisition Scheme, all dealers handling such fruit must contribute to the Fruit Growing Industry Trust Fund at the rate of 1d. per bushel case. "Dealers" have been defined as follows: (a) Someone who purchases fruit from a grower wholesale for retail resale; (b) or who receives fruit from a grower for sale wholesale on behalf of the grower; (c) who being a grower sells wholesale in a season not less than 250 bushels of fruit produced by him; (d) who being a grower sells retail in any one year not less than 250 bushels of fruit produced by him; (e) or who purchases fruit wholesale for resale after some method of treatment which renders it saleable in an altered form or condition.

Market Gardeners' Association secretary, H. D. Mountjoy, states that growers of garden produce are dissatisfied with the present marketing and distribution of their products, and are demanding the right of saying how their produce should be sold, and that boards set up for that purpose should have grower majorities. He quotes the case of the Onion Board, on which growers complain they do not have even equal representation. If dissatisfaction persists there is a likelihood that there will be a growers' "holiday," during which vegetables will be unobtainable.

In the meanwhile, Deputy Prices Commissioner C. P. Mathea has announced that growers' and wholesalers' prices for Beans, Cucumbers, Lettuce, Pumpkins, Rhubarb, Sweet Potatoes and Watermelons have been fixed from control.

Another complaint comes from growers where representatives of the Fruitgrowers' Association are in contact with the Commissioner of

Railways and discussed the late arrival of fruit at the Perth markets. Deputation complained that fruit loaded at Donnybrook and at sidings on the Preston line in the morning was arriving in Perth too late for the following morning's market, with the result that it was held over, resulting in many cases, particularly in that of stone fruit, in losses to the growers. The Commissioner, sympathising with the deputation, said that the railways were anxious to provide rapid transport, but were severely handicapped by lack of coal reserves. Nevertheless, he would do all that he could to see that the grievance was rectified.

Provided that regular shipping space can be secured, there seems to be a first rate market awaiting local fruit and vegetable growers in Bombay, Ceylon, Singapore and other parts of the Malay States and in the islands of the East Indies. During the past few weeks numerous inquiries have been received from these centres, and in addition to 300 tons of Potatoes which were shipped to Singapore, 1,000 crates of Potatoes and 600 crates of fresh vegetables have gone to the British Military Government of Malaya. Large quantity of Potatoes has also gone to Ceylon during the past month. It is considered that this Near East market, if it could be properly developed, would be of considerable value in relieving the West Australian market of surplus produce, particularly at glut periods.

Mumzone Products, Cannington, has an order for canned Potatoes for the British War Office sufficient to keep its plant occupied for about three months, but is finding difficulty, as are most other industrial concerns, in securing sufficient female labour. At the moment some 50 girls are needed at this cannery.

It is alleged that many Potato growers in the Manjimup area have planted acreages this year in excess of those granted, and the field officer of the Australian Potato Committee (Mr. J. H. Kirkpatrick) says that those who have done so may find themselves liable to the penalising clause which means an overall reduction of £2 per ton over the area stated in the contract, with the possi-

bility that the excess crop will not be accepted. A thorough check of acreage is being made.

Personal.

Mr. R. C. Owen, M.L.A., President of the Central Citrus Council of the W.A. Fruitgrowers' Association, returned recently from Melbourne, where he attended a citrus industry conference convened by the Commonwealth Director of Agriculture.

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The capital of the Tropical Traders Ltd., Perth, has been increased to £100,000 by the creation of 25,000 ordinary and 50,000 5 per cent. Cumulative preference shares of £1 each.

DRIED AND CANNED APPLES.

At a recent meeting of the Commonwealth Agricultural Council it was stated that the Commonwealth Government is asking for the greatest possible production of solid pack and dried Apples in the hope of being able to offer fruit supplies in those forms to Britain and so overcome the shortage of refrigerated shipping space which limits the quantity of fresh Apples that can be sent there.

The Minister for Commerce and Agriculture, Mr. Scully, said that he had advised the Apple and Pear Board to secure the biggest possible production of solid pack and dried Apples in all States. Last year, Australia produced 1,750 tons of dried Apples and 5,000 tons of solid pack Apples, largely for the services.

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March, 5th, 1946



The Gordian Knot

According to legend, Gordius, King of Phrygia, fastened his wagon to a beam with a rope of bark so ingeniously that no one could untie it. ALEXANDER the GREAT, being told that whoever undid the knot would reign over the whole East, took his sword and severed it with one bold, decisive stroke.

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NEWS OF THE MONTH

WITH REGARD to present-day matters affecting the Australian fruit industry, it is pleasing to observe that several sections have become soundly organised, some voluntarily, others under appropriate legislative enactments.

For instance, the dried fruits industry can speak with one voice and this means that growers can mutually decide on matters of detail and long-range policy. Organisation has meant that stabilisation of local and overseas markets. Statistics are available and trends can be observed. The industry is in a position to advise the Federal and State Governments on matters of policy, and one matter at least is outstanding: viz., that the serious overplanting which took place after the 1914-1918 war will not be repeated.

Further, the industry has been wise over the years in building up funds for educational publicity. During the war this health propaganda was continued, but only on a limited scale, because supplies were rationed. Now the industry is in a position to launch a vigorous campaign.

The canned fruits industry has organised and has valuable achievements to its credit.

Citrus growers have achieved a valued measure of organisation and are in a position to advise Governments on matters of detail and policy.

Apple and Pear growers in many parts of Australia have organised into co-operative units for packing, cool storage, supply of requisites, bulk loading and manufacture of by-products. Much yet remains to be done in creating 'an Australian wide organisation of Apple and Pear grow-

ers, to observe trends, and decide on matters of policy in relation to local and export trade.

More research work is needed both in relation to cultural matters and marketing. Appreciation is expressed to the Federal and State Departments of Agriculture, the Council for Scientific and Industrial Research, for valuable work accomplished. They have a fine record of achievement in matters such as the breeding of new varieties, in improving technique in spraying, manuring, cultivation, irrigation, cool storage, pest and disease control, etc.

It is hoped that new lines of research will be developed, for instance, in the making of composts for humus. Horticultural literature all over the world now abounds in references to composts and humus. Leadership in this direction in Australia would be of material assistance to producers.

Another line of research is that of marketing.

Marketing research could include the compilation of accurate statistics into each branch of the industry, segregating different varieties; crop reports; market trends; new markets; developing the Australian markets; new types of packages, the "conditioning" of Pears, i.e., supplying to the public in a ripe or semi-ripe condition; more effective contact with the wholesale and retail trade. These are only some of the lines of market research, but sufficient has been said to indicate the line of approach.

Marketing is a science. Best results will never be achieved under haphazard methods—or lack of method.

NEWS IN BRIEF.

The earlier flowering of Apple and Pear trees sprayed with red oil in the winter is reported by the W.A. Supt. of Horticulture. Sprayed trees flowered 20 days ahead of unsprayed trees.

The Apple crop this season in W.A. is estimated at 1,267,600 bushels, as compared with 1,476,160 last season. The Pear crop is also lighter than last year: the estimate is for a crop of 71,000 bushels as compared with 118,079 in 1944.

On the other hand the anticipated citrus crop of 411,000 bushels heavier than the crop of 300,000 bushels vested in 1944.

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Waterlogging and Salting

RUSSIAN RESEARCH CONCLUSIONS

A Kostikov, Chief Consultant of the U.S.S.R. Government on subjects relating to irrigation and drainage, recently summarised the Russian attitude to waterlogging and salting. The following is a summary of a translation appearing in the American paper "Agricultural Engineering," states the Soils and Irrigation Extension Service of the C.S.I.R., Griffith, N.S.W.

Academician Kostikov states that salting and waterlogging are closely inter-related and are due to, first, a high watertable and excessive amounts of irrigation water, and secondly to unfavourable soil structure and high content of water soluble salts.

Prevention must be directed toward eliminating the causes, says Kostikov. This may be done, first, by creating and maintaining the necessary crumb structure of the soil,

decreasing evaporation from the soil and preventing salt accumulation at the surface. Other factors include the use of organic fertilizers, cultivation and soil amendments such as gypsum or sulphur. Secondly, we should prevent a rise in the watertable.

The Russian approach to prevention is very much influenced by the teachings of Academician V. R. Williams, the Soviet Union's outstanding authority in Agricultural Science, especially in the fields of soils, grasses and pastures. Williams taught that maintenance of crumb structure depends on following a grassland system of agriculture, using crop rotations, including grasses and properly managed lucerne. The improvement in soil structure and the shading produced by the plants reduce evaporation and restrict the movement of salts into the upper layers of the soil.

Kostikov stresses the need for a complete system of test wells over an irrigation area, read every five days during the irrigation season and every ten days during the off season. He states that the watertable should be kept below 6ft. to 8ft. from the surface in clay soils for safety from salting.

Viewing an irrigation area as a whole, we may strike a balance between water applied in seepage from canals, in irrigation water and as rainfall on the one hand; on the other side of the ledger, we have evaporation and transpiration and any additions to the watertable level.

Control is effected by limiting the quantities of irrigation water to just that amount required by plants; by reducing seepage from canals; by a good system of surface drainage; by reducing the capillary rise from the watertable, first by lowering the watertable and, secondly, by maintaining a crumb structure of the soil to prevent salt accumulation at the surface; by increasing the amount of

water transpired by encouraging higher crop yields, at the same time shading the soil to reduce evaporation and the rate of upward movement of salts.

Kostikov points out the close relation between salting and waterlogging, and states that preventive measures must be carried out both on an entire irrigation area and on individual farms.

Where preventive measures are insufficient, underground drainage is necessary. However, drainage must not replace, but should supplement the aforementioned preventive measures. He recommends that from eight to 20 inches of water be leached through soil of medium salinity to give reclamation. This should be applied in two or three stages—first, a normal irrigation to dissolve the salts, then four or five days later a heavy flooding to wash out the salts in one or two applications.

This treatment should be carried out in autumn and winter, when evaporation is low.

This, of course, presupposes first, that underground tiles are laid to facilitate internal soil drainage; and secondly, that the land is vacant or growing a crop that will stand up to this prolonged flooding treatment.

Kostikov recommends that irrigated rice fields should not be scattered among other irrigated fields. Rice areas should be isolated and provided with separate irrigation and drainage ditches.

The American reviewer of this work remarks that Kostikov's discussion of the problems and recommendations are much the same as are found in American journals. Australian irrigators will recognise the soundness of the conclusions reached.

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Seasonable Orchard Notes

RUTHERGLEN BUG

Reduced Damage Reported.

In a report issued by the Victorian Department of Agriculture in early February, the following was stated:

Reports indicate that while the Rutherglen Bug is active in many parts of the State, the damage is on a much smaller scale than when the Apricot and Peach crops in the Goulburn Valley were being attacked. In that area the bug has now left the Peaches and is confined to ground crops and weeds. At Rochester there has been increased bug activity amongst tomatoes, while at both Mildura and Swan Hill there has been some infestation of vine crops.

In Gippsland, particularly in the Bairnsdale area, Red Beet crops have been severely affected while damage has been caused also to Potatoes and Onion seed crops. The Minister of Agriculture, Mr. McKenzie, said that the reduced damage now being caused by this pest was due largely to the vigorous steps that had been taken to bring the outbreak under control. Since the first appearance of the bug some 5,500 gallons of 20 per cent. D.D.T. emulsion had been sent to the northern areas, and more than 1,600 gallons to the nearer eastern areas such as Burwood, Doncaster, Warandye, etc. Western District areas also had received considerable quantities mainly for the Onion seed crops. The quantity of emulsion so far distributed to growers was sufficient to make nearly 1,500,000 gallons of spray.

In addition some 32 tons of 2 per cent. D.D.T. dust had been supplied mainly for use in the metropolitan market garden areas. Applied by the ordinary spraying and dusting methods these materials had proved very effective in controlling the pest.

CITRUS RED SCALE.

Menace to Citrus Growers.

Messrs. C. G. Grasby, Renmark District Horticultural Adviser, South Australian Department of Agriculture,

O. E. Halliday (manager Berri Experiment Orchard), C. Pollitt (Horticultural Adviser, Waikerie), and C. R. Aslin (Renmark Fruit Growers Co-op. Ltd.) have been to Mildura investigating the red scale problem in that area. Mr. Grasby states in the "Murray Pioneer" that red scale infestation in Mildura has become alarming and is costing citrus growers tens of thousands of pounds annually.

This year the Mildura Fruit Growers Co-op. has three fumigation batteries in operation, and expects to fumigate 40,000 citrus trees. Each battery has seven men, using 30 tents and works 8 hours each night. There are also three other batteries operating in the area.

Night fumigation starts in December and continues until May. Daylight fumigation is carried out in June, July and August. Many growers are finding it necessary to fumigate every year, merely to keep the scale population down.

Mr. Grasby said this week, commenting on the tour, "I cannot but stress the seriousness of the red scale menace to citrus growers.

"The area under citrus in the upper Murray areas of S.A. is approximately 3,500 acres, 280,000 trees, producing roughly 600,000 bushels of citrus fruits. Of this area under 3,000 trees are known to be infested with red scale. Waikerie, the largest citrus producing area, has only 100 trees affected at present, although the number was much larger several years ago. It was only by a determined effort the incidence of the pest was reduced in that district.

"In comparison to Mildura the S.A. River areas are very fortunate, but if a determined effort is not made to eradicate this menace this State will also become heavily infested with red scale."

Mr. Grasby states that he will determinedly enforce the regulation to reduce this menace, not only for the benefit of the citrus growers but for the River areas as a whole. He asks for the co-operation of all citrus grow-

ers to avert any outbreak of red scale. At time fumigation is being carried out without injurious results to citrus trees, and this system will be pursued as far as possible.

There are certain host plants carrying red scale and such host plants will also be severely dealt with.

U.S.A. APPLE CROP.

1945 Season Lowest on Record.

A crop of 66,754,000 bushels (the smallest national crop ever recorded), is the U.S.A. estimate for 1945. This is a decrease of 44.9 per cent. from the 1944 crop, 39 per cent. below the five year average, 43.6 per cent. below the 10 year average.

The importance of Washington State in Apple production, states "Appleland News," is found in the fact that the State in 1945 yields 27,000,000 bushels or 40 per cent. of the nation's total Apple crop.

PERSONAL.

Awards of scholarships entitling holders to free board and lodging and tuition for periods of up to three years at Dookie and Longerenong Agricultural Colleges (Victoria) are:—Agricultural College (Government) Scholarships: J. C. Banfield, Mooropna; J. Brockwell, Barwon Heads, C. H. Chapman, Youanmitte; W. H. Mason, Kerang; J. M. Ridgway, Ascot Vale; Young Farmers' Clubs' Scholarship: K. G. Baxter, Mooropna North. Education Department State Scholarship: J. R. Glasson, Bamawm. Murray and Allan Bell Memorial Scholarship: J. M. Ridgway, Ascot Vale. Fink Scholarship: J. S. Smith, Longerenong College. Cuming Scholarship: J. A. Byrne, Dookie College.

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HI-PRESSURE ROTARY COUPLING.

Attention is directed to the advertisement elsewhere in this issue, for the Wood's Hi-Pressure Rotary Coupling, which connects spray rod to hose. This coupling screws into the rod, the rotating spindle clamps into the hose.

Special features of this rotary coupling are as follow:—No strain on operator's wrists, hose automatically untwists, spray pressure is unaffected, couplings do not leak, better and easier spraying, hoses last longer, kinking is prevented by inserting double-enders in centre of long or broken hoses.

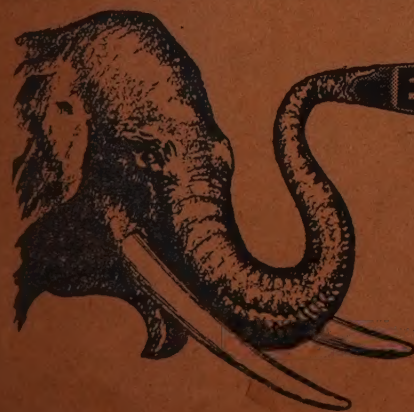
The Wood's Hi-Pressure Rotary Coupling is made in standard sizes $\frac{1}{2}$ inch and $\frac{3}{4}$ inch, other sizes can be made on request, if the size of the hose is unknown it is suggested by the manufacturers that a sample of the hose be sent.

The price of this coupling is 14/- each, plus postage, and is obtainable from Wood's Hi-Pressure Rotary Coupling, 16 Derwentwater Avenue, Sandy Bay, Hobart, Tasmania.

WHOLE GRAINS FOR POULTRY FEEDING.

Tests conducted at the State Research Farm during the past two years have shown that satisfactory results can be obtained by feeding to poultry whole grain and no mash, provided the necessary amount of meal is consumed to balance the ration. Poultry Experts of the Victorian Department of Agriculture, points out that the grain which consists of wheat, oats, maize and barley, may be fed in two ways. It may be fed regularly twice a day, allowing the birds as much as they will eat at each feed or it may be always available in hoppers. With either system the meal is placed in a hopper and is always available.

In view of the shortage of bran and pollard and the difficulties of transport, the simple method of feeding a variety of whole grains plus free-choice meal, can be recommended, especially to farmers and others who are keeping poultry as a sideline and who may have some grain available on the farm.



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Extract from "BETTER FRUIT," by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: **CODLING MOTH COVER SPRAYS**—"Ever since the imposition of an arsenic tolerance in 1936, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codling moth control."

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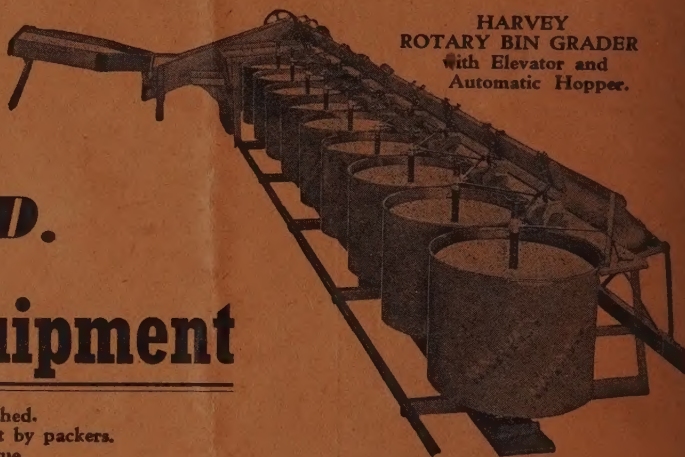
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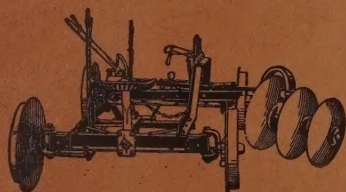
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Crop Reports

VICTORIAN CROP CONDITIONS.

Heavy Rain Benefits Most Crops, But Damages Vine Fruits.

Melbourne (5/3/46).

The Vic. Dept. of Agric. reports as follows:—

Heavy rain which was widespread throughout the State during February, proved of considerable benefit to deciduous and citrus fruit crops, but resulted in some damage to the dried fruits crop.

The development of the large crop of Apples to full size is now assured. Reports from all districts indicate that codling moth damage has been less this year than for some time. Woolly aphis has caused very little trouble this year. Gravenstein Apples were harvested and a start has been made on picking Jonathans.

The harvesting of the Williams Pear crop was almost completed. In the Goulburn Valley, yields were above expectations and codling moth damage was considerably less than last year. A start had been made on the picking of Packham's Pears. Harvesting of Levis Peaches was completed during the month. Because of the quantity damaged by Rutherglen Bugs, deliveries to canneries were light. Brown rot has appeared in the Peach crop following the recent rain, but it is not expected to cause any serious damage.

Young fruit trees planted last year have made excellent growth. The season has been favourable for nursery work and the rain will have the effect of prolonging the budding season.

The use of hormones on Apples and Pears for the prevention of fruit drop has been widespread this season and growers have been satisfied with the results.

The citrus crop in northern areas will be considerably below normal this year. As a result of the rain the trees have made excellent growth and are in a particularly healthy condition at the present time.

Considerable damage has occurred to the Currant and Sultana crop as a result of the rain. Damaged berries are commencing to fall and some mould is noticeable in closely packed bunches. Picking of Sultanas has commenced, and it is expected that sufficient labour will be available to deal with the crop.

Vegetables.

Deliveries of Tomatoes to factories continued during the month. Damage by Rutherglen Bug, Tomato Moth and the recent rain have resulted in considerably lighter yields this season. Prices for Tomatoes forwarded to the market have continued at a high level. Plantings of Peas, Beans, Lettuce, Carrots and Parsnips in northern areas will benefit from the rain.

Harvesting of Pea and Onion seed crops in the Geelong area was completed. Brussels Sprouts, Cabbages and Cauliflowers are being planted under ideal conditions in the metropolitan area.

Green Beans have been forwarded to Melbourne and Sydney in considerable quantities from East Gippsland and have brought high prices. Harvesting of seed Beans has commenced in this area.

NORTHERN TASMANIA.

Launceston, 22/2/46.

FURTHER BENEFICIAL RAINS throughout Northern Tasmania have improved all fruit crops, previous to the rains of February 18, when 5in. was recorded in the Tamar Valley in 24 hours and 6 in. in the Mersey Valley, the Apple and Pear crops were considered to be the best for many years, both as regards size and colour, and cleanliness, and following this soaking rain, the value of the crop will be further enhanced.

It is most fortunate in one sense that the Apple crop is on the large size, as following the cancellation of the majority of oversea shipments and an increased demand for dried and solid pack Apples, the crop will be a perfect processing article. It is expected that the three processing factories in the West Tamar will commence work early in March with C.O.Ps. for canning and most other early season varieties for the driers.

The Tamarco Canning Factory is at present working on Plums and Blackberries, and it is intended to work on a quantity of W.B.C. Pears before commencing on Apples.

The first shipment of Apples by the Apple and Pear Marketing Board for Sydney left Launceston on February 16, it consisted chiefly of W.P.M., with a few Alfs., the quality of the fruit was favourably commented upon by the inspectors.

There is no shortage of case material in the north at all, but the labour position is still most acute, especially as regards packers, it is generally anticipated, however, that to a great extent the labour position will improve as the season gets under way.

Personal.

Mr. Gordon Boatwright, of Latrobe, who was one of the pioneer orchardists of that district and has for many years been conducting the only community packing shed in that area has been experiencing very indifferent health for some time and as the re-

sult has passed his packing shed into the hands of the A. R. Griffin, who intends to carry on the shed to the fullest extent of available labour.

Mr. Harry Astell, of Spreyton, is to be congratulated on the celebration of his 73rd birthday on February 19. Mr. Astell enjoys the best of health and apart from his orchard, which picks an annual crop of 11,000 bushels and farming and stock raising interests, he still finds time to be the chairman of directors of the Renison Bell Tin Mine, which often entails him in long and arduous journeys to the mine on Tasmania's west coast.

N.S.W. CROP FORECAST.

Expected Crops: Apples 1,052,000 Bushels; Pears 208,000 Bushels.

Sydney (22/2/46).

The Marketing Division, N.S.W. Dept. of Agric. reports as follows:—

Hot and dry conditions have been relieved in recent weeks by beneficial rains and this is expected to result in fruit sizing satisfactorily. Hail damage so far has been only of a minor character.

In the aggregate, Apple crops are good and some heavy yields are expected in the more favoured areas. Some reporters state that the Apple crops in their districts are the best for a number of years. On the other hand, it appears to be an "off season" for Pears, crops for the most being only moderate.

Based upon conditions as at February 6, 1946, it is anticipated the total yield of Apples in N.S.W. in the current season (1945-46) will approximate 1,315,000 loose bushels, while Pears should aggregate 260,000 loose bushels. This is equivalent to 1,052,000 and 208,000 packed bushel cases of Apples and Pears, respectively.

This forecast is based upon the outlook as at February 6, and various damaging factors such as hail, disease or pests could result in a reduction in the quantity of fruit finally packed in individual orchards.

TASMANIA.

General regret is expressed because the anticipated export of 1,500,000 bushels of Apples to U.K. this season will not eventuate because of shortage of refrigerated space.

Mr. J. B. Mills, Chairman of the Apple and Pear Marketing Board, and Mr. L. S. Taylor, executive member addressed meeting of growers in Tasmania during February.

It was stated, however, that approximately 300,000 cases will be exported from Tasmania to Scandinavia.

SOIL EROSION.

Orchards and Vineyards Suffer in South Australia.

To control the erosion that is now taking so much of the surface of orchards and vineyards, changed cultural methods are necessary, states Mr. J. A. Beare, B.Ag.Sc., Assistant Soil Conservator, South Australian Department of Agriculture. Recommendations include improved cultivation technique to ensure maximum absorption of water by (1) maintaining or increasing the organic matter of the soil; (2) cultivating only to obtain reasonable weed control and leaving the surface rough or cloddy; (3) cultivation marks should be across the slope rather than up and down hill, so that they dam the water on the area and increase the time for absorption.

Contour planting of orchards and vineyards is recommended.

RAIN DAMAGES DRIED FRUITS.

Heavy rains during February caused damage to dried vine fruit crops in parts of Murray Valley.

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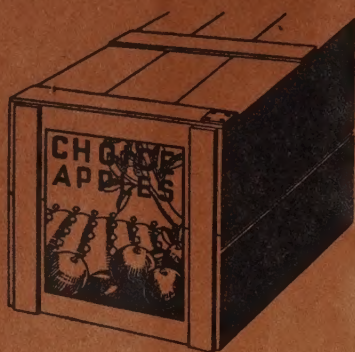
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CITRUS INDUSTRY OUTLOOK

Potentialities of the Local Market.

"Stability in the citrus growing industry—the avoidance of alternating periods of boom and depression—can only be attained by long-range planning, and such planning is only possible through organised groups of enlightened individual growers," observes Mr. R. J. Benton, special fruit instructor of the N.S.W. Department of Agriculture. "The prime objective of the industry must be to make available to the consumer fruit of dependable quality at a price which is mutually satisfactory. The achievement of this objective will involve the close scrutiny of many practices, and considerable adjustment of methods of distribution as well as methods of production.

Fortunately for prospective soldier settlers, shortage of nursery trees has acted as a curb on boom-time expansion. Because of this shortage, it will be some years at least before production can catch up with the demand at the present level.

Great Expansion in Overseas Outlet Unlikely.

"Regarding outlets overseas for citrus fruit, it is not believed that this will be much better in the post-war period. In pre-war days export of citrus fruit fluctuated, but approximated 500,000 cases, the majority of which was sold in New Zealand with lesser quantities to Canada and the Far East. It is not likely that that position will materially alter. Even with faster means of transport, the European market is not likely to become attractive because of greatly increased plantings in U.S.A., the development of canned juice and the large production in Brazil and South Africa—each being nearer European markets and capable of great expansion at low cost of development.

"As indicated, however, there is a local market which has yet to be satisfied. In the problem of its exploitation there are admittedly factors beyond the control of the grower, such as the buying capacity of the consumer. To come to economic terms with this is likely to be more difficult than it has been in recent years, but to a large extent, as in all businesses, it is a matter of efficiency in methods of production and sale."

WAR AGRICULTURAL COMMITTEES DISBANDED.

Announcing that War Agricultural Committees throughout Australia would shortly cease to operate, the Minister of Agriculture, Mr. McKenzie paid a tribute to the members of the Victorian Committees. These Committees, he said, had operated as part of an Australian wide organization during the most critical years of the war, and had rendered the nation a splendid, unselfish service. Created primarily to organize rural manpower and resources in a drive for greater production from the land, and at a time when both materials and labour were sadly depleted by the demands of war, the Committees had done a job of which they might well be proud.

The decision to terminate the organization, said Mr. McKenzie, had been made by the Commonwealth and State Ministers of Agriculture at a meeting of the Australian Agricultural Council, held in Sydney on 6th February.

Fruitgrowing in Tasmania

SOME LEADING GROWERS — THEIR YIELDS AND METHODS.

PROLIFIC CASTLE FORBES BAY.

(By Our Travelling Correspondent.)

CASTLE FORBES BAY, just south of Franklin and north of Shipwright's Point on the Huon, is one of the most productive Apple growing areas in the world. In the square mile of this gently rising, rich grey loam valley, open to the south east and protected, on the north and west especially, by its sheltering hills, a quarter of a million bushels of Apples are grown each year.

Except for one orchard it was unscathed by the November hailstorm, which so devastated its neighbours, and particularly the districts of Cradoc and Wattle Grove, whose orchards may be espied a mile across the limpid Huon patterning the lower hillsides with their criss-cross rows.

Only the orchard of Mr. C. E. Norris and a portion of the A. J. Nicholas Estate adjoining, which are on the margin of the Bay, suffered hail damage. Mr. Norris, whose only son after three years is still posted missing, says these material losses seem trivial when compared with the heart-ache and the cost of the War.

This grower has 30 acres of orchard, only part of which is in full bearing so that its 16,000 bushel 1945 yield is not more than an indication of its potentialities. A mature 1½ acre section crops 1,500 bushels.

Care of the soil, the trees and of equipment are typical of this prosperous valley. Mr. Norris favours Tick Beans for cover crops and discs them in about 1st Feb. Only four tons of 2-2-1 fertiliser were allotted him per year in recent times, so it was applied on alternate parts of the orchard and green crops were relied upon for the rest.

A tractor is used to cope with the manpower shortage and a Petty plough, spring-tooth and disc, are the implements preferred for cultivation. "As soon as the Apples are off, plough," says Mr. Norris.

Over-head Spraying.

A "Roseberry" 3 h.p. two plunger pump, working at a pressure of 350 lb. and averaging 800 gals. a day, enables two men to spray the 30 acres thoroughly in nine days.

The over-head pipe spraying system is so common place on Southern Tasmanian orchards that its absence is more noteworthy than its presence. The pumps are not subjected to the strain and stress that the portable variety are. Of the hundreds seen in action, perhaps that was the explanation why not one was not functioning perfectly. ½ inch piping is universally preferred, though ¾ inch gauge is sometimes used until the branch pipes are met.

The sprayers work independently of each other, and if interrupted by a shower simply switch off and start again when it is over. In the case of the horse drawn pump, difficulties are constantly being experienced in wet soil and on steep terrain. Furthermore, the sprayers, so to speak, are tied together and, into the bargain, have to be constantly journeying back and forth for refilling. Should rain apparently set in, the horse may be unyoked and turned out in the paddock when the weather may clear; in which case it is doubtful whether it

is worth while restarting, and the orchardist probably has the problem of finding work for the men in the meantime. Finally, over-head systems may be installed for the same cost as a portable outfit.

Mr. Norris advocates 200 ft. lengths of hose—then a man can operate from one tap for a whole day. Besides which there are less piping, taps and waste. On an average, other growers favour 120 foot lengths of hose and more taps; maintaining that more hose is too heavy and, in any case, is more expensive in the long run than pipes.

Bordeaux mixture is applied in the late dormant stage—the green tip being considered too late; then lime sulphur in the pink; and lime and colloidal sulphur and lead arsenate in the calyx; followed at intervals of three weeks by two further lead sprays with white oil in the last. A little oil is likewise used with the Bordeaux—since when no sign of red spider.

W. G. James & Sons.

The 40 acre orchard of Messrs. W. G. James & Sons, since 1939, has averaged 30,000 bushels per annum. Apples are Cox's, Jonathans, Crabs, Cleos, Delicious, Granny Smiths, Scarlet, Sturmers, Democrats. Pears grown are Winter Cole, Nelis, Beurre Bosc, Giblin's Seedling, Easter Beurre, Comice, Gansell's Bergamot and Packham—the Huon in their opinion is too cold for Josephines. Pears are planted 20 feet apart on the square and Apples 15 feet on the square.

Twenty tons of 2-2-1 orchard manure mixture were applied this season. Lime at the rate of ½ ton to the acre is used occasionally. Ploughing is commenced in the early winter and repeated in the spring. They use a Petty plough, off-set disc, tandem and cultivator and finish off with a "bush and bog." No repairs in seven years have been required for their 20 h.p. Caterpillar tractor.

A 7½ h.p. Buzacott's "Roseberry"

pump is used to drive 200 gals through their over-head system, spraying for two sprayers every 1½ hours.

The programme is most interesting, two Bordinetti applications are thoroughly recommended for most varieties excepting Scarlets and Cox's Orange Pippins. 6 to 40 is used in the early green tip and 4 to 40 in the late green tip. Though not in evidence this season, black spot was very prevalent in Southern Tasmania last year.

Orthodox lime sulphur is applied in the pink, and is followed by three colloidal sulphur and lead arsenate sprays commencing with the calyx. A fourth and final lead is combined with a white oil.

A spreader is always used with the Bordinette, and although a third application of 2 to 40 was made in December on all varieties of Pears, excepting Winter Coles, no signs of russeting appeared.

Neil James.

Next door, moving up the valley is the ten acre orchard of young Mr. Neil James, who with an 8,000 bushel average yield maintains the traditional productivity of the Bay.

Apple pie cultivation is by means of a swing plough in the early winter and a disc cultivator in the early spring — thereafter a spring tooth and a peg harrows.

J. D. McCarthy & Sons.

A little further on and you come to the oldest orchard in the Huon, that of J. D. McCarthy and Sons. This grand old family could tell an interesting story, but are publicity shy! Mr. J. D. and his son Malley, showed me over the thirty two acres, and there was evidence aplenty for the tip I got from a district measurer, that it and its neighbour—the orchard of Mr. E. F. Smith—were his pick of the whole Huon.

E. F. Smith's.

12,000 Bushels from 12 acres, a rich tilth and not a twig out of place, and a home buried in a glory and a riot of flowers, creepers, shrubs and trees, are the possession of Mr. E. F. Smith.

Here there are thirteen varieties with Sturmers in the main—then Jonathans, Granny Smiths, Democrats, Cleos, Croftons, Scarlets,

Lallas, French Crabs, Duke of Clarence and Worcester Permaines. In Pears—Winter Coles and Beurre Bosc.

Ploughing is done in the late Autumn and again in the early spring. Eight tons of 2-2-1 orchard manure are used in addition to blood and bone when available. "Blood and bone," says Mr. Smith, "is best for growth; 2-2-1 is best for fruit."

Bringing An Orchard Back.

A further 7 acres purchased last year by this grower are proof that the Bay's prolific yields are not solely a matter of soil and sheltered position. Formerly the property of one of the leading growers in the area, through illness it had been allowed to slip back to a mere 3,000 bushels—which indeed in many districts might be considered a tolerable yield from 7 acres, but may more or less be only whispered here. It is, however, responding quickly to treatment, and Mr. Smith confidently expects its eventual one thousand bushels to the acre.

First it was very severely pruned—three parts of the buds being cut out. Next 5 tons of 2-2-1 were applied and it was thoroughly turned over with a single furrow plough and then churned up five or six times by a rotary hoe.

In Mr. Smith's normal spraying programme a red oil is used with a 6-4-40 bluestone. Cleos, Croftons and Granny Smith's are given a second application at 4-4-40 strength. Lime sulphur follows in the pink; then two Wetsul and lead Arsenate sprays.

Last year on this 7 acres Codling Moth was present in force, so the bark of the trees was thoroughly scraped and six double strength lead arsenate sprays were applied from the calyx onwards with the result that one would be hard put to it to find a pocket full of strikes this season.

Varieties are Winter Coles and Josephine in Pears and Sturmers, Scarlets, Cleos, French Crabs and Jonathans in Apples. The five old varieties of Alexanders, Croweggs, Newtown Pippins, Dragoons and Hollow Crowns have been reworked to Red Jonathans—tongue, rind and bark grafts being used.

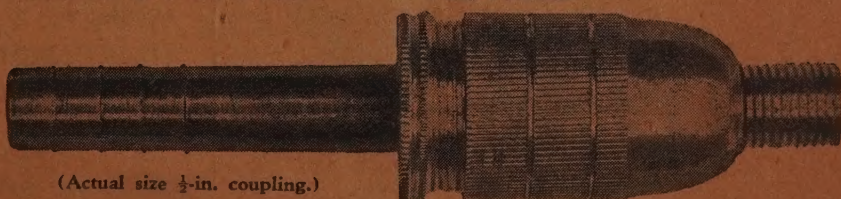
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The Connolly Shaw Organization was built up some years before

the war by the combining of a number of old-established businesses situated throughout the various ports of the British Isles. In this way it was found possible to give individual attention to shipments at each port, and to offer shippers the added advantage of a nation-wide sales and distributing organization.

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SOUTH AUSTRALIA	- - -	Elder Smith & Co. Limited
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 **PLANT PROTECTION PRODUCTS**

Huon (Tas) District News and Notes

(By Our Correspondent.)

Geeveston (16/2/46).

Export Difficulties.

A general cancellation of allotments for the early English shipments was the first intimation growers received that plans for marketing the Apple and Pear crop in 1946 were meeting trouble.

Tasmanian members of the Federal Parliament met the State Fruit Board at its meeting on February 13, and undertook to stress the need for adequate interstate shipping services to the Federal authorities: 300,000 cases for Scandinavia have been arranged for and can be delivered as far as is now known.

The shortage of refrigerated shipping space emphasises the need for an increase in processing programmes. Mr. J. R. Abel states that the processed pack for '46 will be larger than for '45, when 2½ million cases were handled. The food position in Britain is causing much concern and it is realised that more help can be given by sending canned and dried fruit than by sending fresh fruit.

Canned Apples for Domestic Use.

A feature of the post-war marketing of Tasmanian Apples will be the introduction of solid pack and crushed Apple to housekeepers in tins of a size suited to small householders. The 6 lb. tin was sought after by large catering establishments, but these, after all, only serve the travelling public and the main market is in the homes of the people. The present change over to 30 oz. tins may herald a considerable increase in the Apple consumption of the Australian public and may make possible all-the-year-round sales at prices suitable to both growers and consumers.

Weather and Crops.

At the time of writing there is an acute need for rain over all Southern Tasmania. In the Huon the winter rains were adequate and continued so up to the first week in November. Since then Apples and Pears have been helped by occasional light rains and the general condition of the trees in most areas is remarkably good, but orchards on light and shallow soils are beginning to suffer. Growers are spending most of their time in the Huonville area in thinning operations which were in any case needed owing to the heavy crop, but have become more so because of drought. The position is better in Franklin, Geeveston and southern districts. Geeveston rainfall, January 1 to January 1, for the past three years, is as follows: 1943 41 ins., 1944 59 ins., 1945 34 ins.

Picking for local markets has already begun, but this is only taking small quantities, mainly Alfriston. and it is hoped that the bulk of the Alf. crop will be required for processing as crushed Apple. Growers of Cox's Orange Pippin are likely to have most of that variety left on their hands unless prospects of English shipment improve. The need for a campaign to make this best of all eating or cooking Apples known to the Australian public is again evident.

Potato crops in Southern Tasmania are very light and the shortage of vegetables is acute. Hail, bushfires

and drought have all taken a toll, and losses from insect pests have been unusually heavy. Small fruit growers have had poor crops and are applying for Government assistance to carry on. Raspberries and Strawberries were very light, Black Currants medium. Blackberries flowered very late and, although there is an excellent crop on the vines the picking season will be short.

New Packing Shed.

The Port Huon Co-operative Assn. is erecting a fine new packing shed at Geeveston with a capacity of 120,000 cases a year. A very solid reinforced concrete floor is being laid down so that lorries can be taken right into the shed to unload where convenient. It is anticipated that there will be a big increase in centralised packing and selling during the next few years. Including this shed, centralised sheds in Geeveston will be able to handle about one-third of the crop of 600,000 bushels.

Sulphate of Iron.

Growers have been interested in the article on sulphate of iron by Mr. N. H. White, Plant Pathologist, Tasmanian Dept. of Agriculture, reprinted in the January issue of "The Fruit World." As a matter of practical experience, sulphate of iron applications are recommended by a number of experienced growers, although agricultural chemists have always said that very little good can result from using it. However, there must be some factors involved which the chemists have not taken into account because the improved condition of trees on many areas where sulphate of iron is used speaks for itself. Raymond Bush, the well-known English writer on tree fruits, remarks: "It is easy to overdo lime on well drained soils, and this may lead to iron deficiency." This may have some bearing on the problem. As Mr. White remarks: "In Tasmania the virtues of sulphate of iron are much over-rated, but its adherents are likely to need a considerable amount of convincing of this fact."

Later: Since the foregoing was written, Tasmania has received soaking rains and a large Apple crop is assured.

The announcement that all exports of Apples to U.K. had been cancelled was noted with deep regret.

APPLE AND PEAR GROWERS' UNION.

At a meeting of the central executive of the Tasmanian Apple and Pear Growers' Union at Huonville in February, the Secretary (Mr. A. B. Crowder) reported that the Union had registered 503 growers, representing a production of 2,500,000 bushels of Apples.

The services of a paid organiser were retained for another month.

It was decided that the Council ask the State Fruit Board to approach the Minister for Agriculture for permission to pick hail-damaged fruit, below good quality.

The Apple and Pear Marketing Board has been asked to prevent the selling of fruit to factories at prices below production costs.

Gilburn Valley News and Notes

(By Our Correspondent.)

SHEPPARTON E. (20/2/46).

Pear harvesting:

The W.B.C. Pears are practically all finished for the season, February 20th being the closing date for delivery to both the S.P.C. and S. J. Perry & Co.

Deliveries to these Companies were extended for a few days owing to rain holding up operations also in some cases growers had difficulty in obtaining sufficient labour.

Though the crop was definitely lighter than normal the average tonnage will not be as low as was feared in the first place owing to increased size of Pears and a much lighter infestation of codling moth in most instances.

Because of Rutherglen fly damage to the Peach crop, the S.P.C. did not enforce the quota system this year with the result that a substantial increase in Pear tonnage was received. S. J. Perry & Co will also receive all the W.B.C.'s they contracted for.

Packhams and Buerre Bosc Pears are now being delivered in large quantities to this Company.

Varieties such as Josephine, Winter Nelis, etc., will benefit greatly by the recent rains and not much trouble is expected in getting them to the necessary size.

Peaches:

A fair percentage of second grade Levis Peaches were delivered to the Shepparton Cannery consisting of fly marks, it is the intention of the Company to experiment with the marked Peaches of this variety to remove the marks by a second immersion through the caustic tank.

In the event of this treatment removing the marks satisfactorily it is anticipated that quite a large quantity of the later Peaches will be accepted. Owing to the shortage of labour, absenteeism, and the additional Pears to be processed, no Peaches have been treated to date.

It is expected that a start will be made early next week, growers who have suffered through the ravages of the Rutherglen fly, are anxiously awaiting the results of these trials.

Those growers dependant on Peaches for their main crop will be badly hit unless at least a percentage of fly marked fruit can be processed. D.D.T. Experiments:

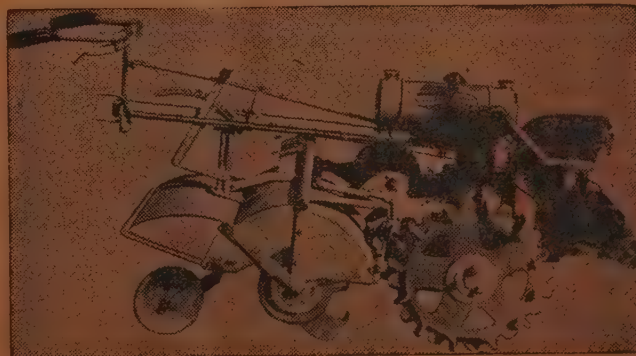
The experiments with D.D.T. for codling moth control are reported to be very satisfactory, trees sprayed with this material showing a decidedly lower percentage of infestation than the usual lead and white oil combination, details of the experiment will no doubt be released by the Dept. in due course.

Several plots of Peaches are also being used to determine the degree of control that can be obtained with the Peach moth; much data is yet required to determine the minimum number of sprays required to gain control, also the most economical and effective strength that can be used.

The prevalence of what is commonly known as black bottom in Pears, is causing some concern among growers, these Pears being unsuitable for canning and where badly affected have to be discarded for the market also.

The same trees appear to be affected each year, in some instances,

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For Apples and Other Fruits

Adapted for New Zealand. No crushing of fruit. Weighs empty an advantage instead of bulk of mesh. Full weight saving for discharge. No hooks or nails.

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"I have used Bay View Picking Bags for many years. They are perfect. Some small baskets but I always come back to the Bay View. I find them good for 10,000 apples per bag. But I find every 1,000 apples."

Now being made at 20 on June instead of 25.

"Bay View" Bag, web straps	12-
"Bay View" Bag, leather straps	15-
Plastic	1 Bag 1 Bag
Webbing Straps	1 1/2 2 1/2
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portion of the tree bears normal fruit and the rest of the tree is affected. The disease is spreading from year to year throughout the Southern Valley.

The matter has now been taken up by the Dept. of Agriculture and research with a view to ascertaining the cause is now being undertaken.

Following the recent rains, crop-growth is making good progress, supplying much needed pasture to be sown in with the autumn ploughing. Many types of orchard produce, especially the heavier soil types will benefit greatly as moisture and water penetration has suffered considerably through lack of adequate summer rain. In the dry winters experienced for the last three years when rain was scarce in the autumn for turning under with the spring ploughing have proved an expensive failure.

An attempt was made recently to produce this seed Beans locally, but proved unsuccessful as a big proportion of the Beans split when being threshed.

MURRAY VALLEY

Development League Requests Board of Enquiry.

Despite the efforts of the Murray Valley Development League—a strong organisation representing the three States concerned—for the setting up of an inter-State Board of Enquiry, the requisite action has not yet been taken. The secretary, Major J. W. Lawrence, who visited the Walberrys, Berr and other South Australian sections of the Murray Valley during February, states that the League's first requirement—the Board of Enquiry—must be the result of realisation. Another matter requiring attention was the proposal of the Federal Government for the setting up of the State Bank to improve an agricultural credit and loan. Progress is being brought in the Federal and State Governments to have the inter-State Board of Enquiry set up.

"THE ORCHARDIST'S LAMENT"

I have a little Apple tree
Of thornless kind most dear to me
I loved that I would be my best
To save it from the insect pest.
I bought a weak, weak, weak tree
I followed out the vendor's tale
In autumn with a sunny hand
I fed it little belly-hand
And then upon each appointed day
I said devoutly, "Let us spray!"
To make the little beggar die
I sprayed with caution, ah! ah!
To think those that were not dead
I sprayed with arsenic of lead
Of sulphur too, I made full use
And thought: my reputation
I sprayed with this, I sprayed with that
I ruined crumblers, cast and set
The grubs as lively as before
Lapped it all up and called for more
Soon, if they spent, there will be
Two Apples on my Apple tree—
One for the grub and one for me.

The foregoing was sent to Mr. H. E. P. Moore of Blackburn—as from which is copied in English "Punch" some years ago.

**An Apple on the Tree
is worth
a bushel on the Ground**

"CLING-SPRAY"

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Stops Preharvest Drop

Simply mix the contents of one
4 oz. bottle of "Cling-Spray" in
100 gallons of water, and spray in
the normal manner, when the first
few of the maturing fruits are
observed to fall.

PACKED 24 BY 4 OZ. BOTTLES PER CARTON

Price . . . 11/6 per Bottle plus freight

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It is significant, however, that large numbers of people have been showing signs of increasing resistance to the characteristic teaching of the Church. This resistance is not as pronounced in the United States, although in the past significant numbers have been turned to the teachings of Unitarianism in their dissent.

THE UNIVERSITY OF CHICAGO

Page 1



修心要略

THE UNIVERSITY OF CHICAGO

Fruit and Vegetables

The U. S. Committee on Fruit and Vegetable Industries recommends consumption of fruit and vegetables every day, and it has, in the following report, the endorsement of the Committee:

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J. W. LEECH CO.
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W. J. PEASE & CO.
E. MERCY & CO.
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H. G. RAVEN & SON
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S. SUMMERFORD
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F. W. WRIGHT & CO. LTD.
Wm. YOUNG & CO.
G. A. TIMBLE & SON

2. 3. 1901. 24. 11. 1901.

W.A. CROP ESTIMATES—Continued.
Estimated Production.

Variety.	Bushels.	Good and better grades.	1944-45: Tree Measurement. Good and better grades.
Bartletts	18,000	33,703*	
Packhams	8,000	9,255	
Josephines	12,000	23,549	
Comice	4,000	9,991	
W. Nelis	5,000	11,752	
B. Bosc	4,000	8,481	
Keiffers	11,000	6,480	
Others	9,000	14,868	
	71,000	118,079	

*Delivered fruit.

Growing conditions have in the main been good but in some districts "Pear scab" has caused damage, particularly on Bartletts. Fruit, however, is in the main well grown and of good quality.

Stone Fruit.

The setting of stone fruits generally is not heavy and estimates of production are as follows:—

Variety.	Bushels.	No on sh Full way hooks to Production, 1944-45.
Peaches	50,000	54,465
Nectarines	5,000	13,019
Plums	65,000	58,904
Apricots	35,000	35,194
	155,000	161,582

The most striking factor this season is the failure of the Nectarine crop, which is estimated to be 5,000 bushels as compared with 13,019 bushels produced last year. The quality of the fruit generally is excellent and at the present time high prices are being received at the Metropolitan Markets.

Citrus.

The flowering of citrus trees generally has been good, although it has been somewhat extended. The initial

setting was very heavy, but a substantial shedding subsequently took place. The crop carried by the trees with the exception of Mandarins and Lemons, is greater than last year. The fruit is well grown and provided weather conditions are favourable, a very good crop of Oranges should be obtained.

Estimated Production.

Variety.	Bushels.	Estimated Crop.	Production, 1944-45.
Oranges	315,000	282,762	
Lemons	65,000	75,420	
Mandarins	13,000	12,824	
Grape Fruit	18,000	15,703	
	411,000	386,709	

General.

The estimates of fruit production have been based on normal growing conditions. Should very favourable weather conditions be experienced it can be expected that estimates will be exceeded.

DRIED FRUITS BOARD (S.A.).

Packing House Improvements : New Apricot Diseases : Murray Development Lecture.

The South Australian State Board disposed of a long Agenda at its first Meeting for the year on 31st January, 1946. The Secretary (Mr. W. N. Twiss), reported that he had written to those Packers which had made improvements to their plant and equipment, expressing the Board's appreciation for their co-operation. In respect to the Door Classification Plan it was agreed to continue the arrangement for the Season 1946, in the Renmark Area and Inspector P. J. Leighton was re-appointed as Supervising Grader. All the Grading Inspectors who had been selected by the Department of Commerce and Agriculture for duty in the present Season were formerly appointed Board Officers.

The Secretary reported a number of instances of Growers who had failed to observe the Regulation in respect to Excess Drawback Fruit. It was agreed that the attention of Packers and Growers again be drawn to the requirements of the Regulation.

The Final Pack figures for the year 1945 were submitted and these were compared with the Estimate for the present Season taken up to the 24th January, 1946. While the Estimate for 1946 disclosed a substantial increase on the actual figures of last year's pack, the Currant position was somewhat obscure owing to the recent heavy rains in all areas as well as to the high prices now being offered for fresh Grapes by Winemakers and Distillers.

A Grower Member of the Board drew attention to a disease which was appearing in Apricot trees. This was difficult to diagnose and could be possibly other than "Gumosis." After discussion it was agreed to endeavour to arrange a conference between the Board and Mr. A. G. Strickland, M.Ag.Sc. (Chief Horticultural Officer).

A report on the activities and progress of the Murray Valley Development League since its inception late in 1944 was read and noted with considerable interest.

In connection with the New Year's Honours, the Chairman (Mr. G. A. W. Pope) reported he had, on behalf of the Members and Officers of the Board, written to Sir George Jenkins, M.P. (Minister of Agriculture), congratulating him on his receiving a knighthood. The Chairman's action was endorsed.

INSTRUCTIONAL FILMS.

Screenings Can Be Arranged.

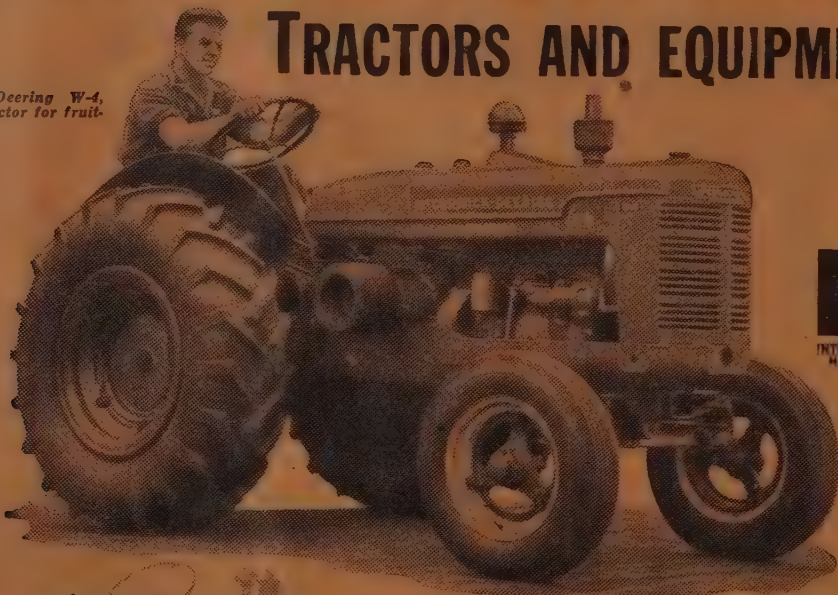
Documentary and instructional films produced by the Victorian Department of Agriculture are available for screening to audiences in country districts and provincial towns. Secretaries of Agricultural Societies, Young Farmers' Clubs and similar organisations desirous of arranging a screening of these films should write direct to the Director of Agriculture, Victorian Department of Agriculture, Melbourne, C.2.

The Department provides an operator, projector and the films, the local organisation being required to supply only a suitable hall equipped with electric light. No charge is made for this service.

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McCormick-Deering W-4, an ideal tractor for fruit-growers.



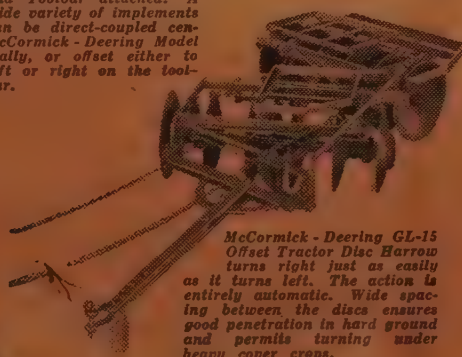
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THE McCormick-Deering W-4 tractor can be supplied with hydraulic lift and toolbar, together with a wide variety of specially designed toolbar equipment for ploughing, cultivating, and essential offset working in orchards, vineyards and citrus groves. The hydraulic lift makes raising and lowering of the implement remarkably simple for the operator—just a press of the control button automatically raises the toolbar and attached implement clear out of the ground for easy turning on short headlands, or for transport. Similarly, the implement is quickly re-engaged to the pre-selected uniform working depth, or it can be gradually controlled in difficult, soft spots. In addition, there is a range of trail-behind equipment, including the new McCormick-Deering GL-15 Offset Tractor Disc Harrow shown at left. Your nearest International Harvester Agent will be pleased to give you full information.

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Above illustration shows: W-4 with Hydraulic Lift and Toolbar attached. A wide variety of implements can be direct-coupled to McCormick-Deering Model tractor, or offset either to left or right on the toolbar.



McCormick-Deering GL-15 Offset Tractor Disc Harrow turns right just as easily as it turns left. The action is entirely automatic. Wide spacing between the discs ensures good penetration in hard ground and permits turning under heavy cover crops.

SOUTH AUSTRALIAN NEWS AND NOTES

Official Reports and Notes of the South Australian Fruitgrowers' and Market Gardeners' Association.

S.A. Fruitgrowers' and Market Gardeners' Association Inc.

Minutes of Executive Committee meeting held in the Newmarket Board Room, Friday, February 22, 1946.

Mr. A. R. Martin, President of the Association presided over the meeting, which was attended by the following Committeemen:—Messrs. H. B. Robson, G. H. Schultz, L. B. Pfeiffer, R. A. Cramond, O. Esselbach, H. J. Gleeson, W. J. Bishop, C. J. Pitt, H. N. Wicks, J. Turner, C. Ridley, W. Wye, A. E. Brealey, J. B. Randall, W. J. Burdett, W. Nicol, N. T. Hobbs, G. H. Sharpe, L. J. Wicks, M. Hannaford, R. Jackson, A. G. Strickland (Chief Horticulturist), and the Secretary (Mr. A. Stuart).

Apologies were received from Messrs. C. L. Winsor, F. A. Halleday, K. H. Caldicott, J. D. Yeatman, C. Stanford and A. D. McAllan.

The minutes of the January meeting as reported in the "Fruit World" were confirmed.

Arising out of the minutes the chairman reported that the Committee appointed at the last meeting to meet the Minister of Agriculture had met the Minister and he outlined the discussion that took place between the Minister and the Committee.

Correspondence was received and dealt with as follows:—

A letter was received from the S.A. Chamber of Rural Industries informing the Association that the Road Transport Board would meet any deputations that wished to interview them on February 23, 1946. Mr. H. N. Wicks said that the facilities for loading fruit on the railways at Strathalbyn was very bad, and road transport should be used if it was possible to do so. At present the fruit had to be handled four times to come to Adelaide by train as against only twice any other way. He thought that this should be brought under the notice of the Road Transport Board through the Chamber of Rural Industries.

Mr. Pitt said that at present there were five trains weekly, as against two up to a fortnight ago. There was a big fleet of motor trucks available for the transport to the city of Potatoes and fruit, but unfortunately there was no petrol.

It was finally decided on the motion of Messrs. Bishop and Pfeiffer "That a Committee be appointed from this meeting to meet the Chamber of Rural Industries at the earliest opportunity to discuss the matter of transport." This was carried and it was decided that if the meeting was

arranged for this afternoon that the following represent the Association: Messrs. N. T. Hobbs, C. J. Pitt, and the Secretary, whilst if it was necessary to meet the Road Transport Board that Messrs. H. B. Meyer, H. N. Wicks, C. J. Pitt, and the Secretary, represent the Association.

Mr. F. K. Nieass, M.P., wrote apologising for his absence at the meetings arranged to meet the C.O.D. delegates and asking for information relative to the activities of the Association. Mr. Brealey moved and Mr. Robson seconded "That Mr. Nieass be written to and thanked for his interest in the Association, and would be pleased to assist him in obtaining knowledge of the activities of the Association." Carried.

The Protected Industries Workers' Association of Australia Inc. wrote as to the aims and objects of the Association. It was decided on the motion of Messrs. Bishop and Esselbach that the letter be received and no action taken.

A letter was received from the Secretary of the Gumeracha H. & F. Society, that its show would be held at a date in the near future, and asking for assistance with its prize list. On the motion of Messrs. Bishop and Robson it was decided to forward membership fees to the society.

The Australian Potato Committee forwarded a report drawn up by a Sub-committee of the Produce Importers' Committee which made certain recommendations with regard to handling of Potatoes in the post-war period. Mr. Pitt said that South Australian growers as a whole were opposed to smaller bags being used, and consider that the bags in use at the present time were satisfactory.

Mr. Bishop said that the time was ripe when the Society should make application for permission to distribute Potatoes as a Growers' Co-operative Association. He moved in this direction, and his motion was seconded by Mr. L. J. Wicks. Carried.

Mr. Pfeiffer supported the remarks of Messrs. Bishop and Wicks, and said that Hills growers were opposed to the smaller bag being used.

Reports.

Mr. Stuart reported on the recent meetings held when Major Savage and Mr. B. Flewell Smith reported on the activities of C.O.D. in Brisbane, and outlined the possibilities of that organisation. The meetings had been largely attended, and most meetings were in accord with the suggestions put forward, but one meeting was divided in its opinion. Unfortunately, Major Savage had the misfortune to suffer a bereavement whilst in Adelaide, and had to return to Brisbane at the conclusion of the last meeting.

Messrs. Bishop and Brealey paid tributes to the two speakers from Brisbane, and expressed the opinion that their visit would mean a lot to the Association in its proposed activities.

Mr. Bishop moved "That a letter be sent to the Executive of the C.O.D. Brisbane, thanking them for allowing Major Savage and Mr. Flewell Smith to visit Adelaide, and also a letter to Major Savage sympathising

with him in the loss of his father. Seconded by Mr. Brealey. Carried.

Mr. Hobbs moved "That a vote of thanks be placed on record for the service rendered by Messrs. Martin, Bishop, Winsor, Halleday and Stuart for their untiring efforts during the visit of the C.O.D. officials, also Messrs. Bishop and Stuart for their report on their visit to Brisbane, which was the forerunner of the recent visit of its officials." This was seconded by Mr. Turner and carried by acclamation.

Sectional and Branch Reports.

Society: Mr. Bishop reported that trading was satisfactory and the Committee hoped that the Association would be able to move into the new premises very soon now. A manager had been appointed and the new grader should be ready for use next week. The society would be able to pack and grade Apples for growers then, and reminded the meeting that the Society would be able to supply most of their requirements as well as grade and pack their fruit.

Cherry Section: Mr. Bishop said that one train load of Cherries forwarded to Melbourne had been delayed in transit, and consequently had to be sold to factories. A claim had been made on the railways for compensation.

Apple and Pear Section: Mr. Stuart said that the chairman of the Section was in Melbourne, but he had reported that as regards overseas export the English order appeared to have been cancelled, but the Swedish order should be consigned in April.

Mr. Gleeson said that the railways should charge a flat rate for the conveyance of Apples, instead of the sliding rate as was in operation at present. He suggested that a deputation should wait on the Commissioner of Railways in regard to the matter.

The chairman explained that a deputation had previously met the railways on the matter, and not much satisfaction had been received, but the matter would be brought up again at a later date.

Mr. Jackson asked if the Apple and Pear Committee had thought of advertising their fruit at railway stations, as he was given to understand that space on hoardings could be arranged for. It was suggested that the matter be left in the hands of the Apple and Pear Committee. Mr. Jackson said that a suitable office should be arranged for the sales manager. After it being pointed out to Mr. Jackson that this was a matter for the Apple and Pear Section to approach the Society on, Mr. Jackson moved "That it be a recommendation to the Apple and Pear Section that a suitable office be procured for the sales manager." Mr. H. N. Wicks seconded the motion. Carried.

Vegetable Section: Mr. Stuart said that price control on some vegetables had been recently lifted as far as growers were concerned, but no apparent difference had been noticed, and prices had remained unaltered.

Citrus Section: Mr. Esselbach reported the recent rain had benefited

the crops, but yields were light. Valencias were about the most prolific.

Celery Section: Mr. Ridley said that planting was going ahead, and there was little to report on Celery.

Paracombe Branch: Mr. Brealey said that Duchess Pears were being handled at the present time, and there should be fair quantities of Apples about soon, although a few early ones had been handled. Sheds were short of packers and labourers, and although there were some junior packers helping, he thought that a school of instruction for packers should be started again as was in operation prior to the war.

Cudlee Creek Branch: Mr. Hannaford reported that the rain had done good, and Pears were being stored for canning purposes. Labour was scarce, and he appreciated the assistance of the Department of Agriculture.

Onkaparinga Branch: Mr. Pfeiffer said that Potatoes in the low-lying country had suffered some damage from the recent rains, but crops in the higher parts would benefit. Mr. Pitt said that as far as his district was concerned, crops in the low-lying country had been affected, and patches in the Hindmarsh Valley had suffered considerably.

General Business.

Mr. Stuart said that he had met growers from the Kangarilla and Clarendon districts who were interested in the Association, and he proposed to visit those centres in the near future. Mr. Turner offered to accompany the Secretary on his visit.

Mr. Stuart reported on visiting the Port Pirie Branch last week, where the branch is progressing satisfactorily. The freight question was discussed and a plan proposed which might alleviate the position.

Mr. Bishop moved "That Messrs. Pitt and Kentish be asked to represent the Association at the Conference of Potato growers to be held in Tasmania at the end of March, and the usual expenses allowed." This was seconded by Mr. H. N. Wicks. Carried.

Finance.

The Secretary's financial statement was submitted to the meeting and approved.

There being no further business offering the meeting closed at 12.22 p.m.

FRUIT BUYERS

LEMONS, ORANGES, GRAPEFRUIT,
PEARS, PEACHES, APRICOTS,
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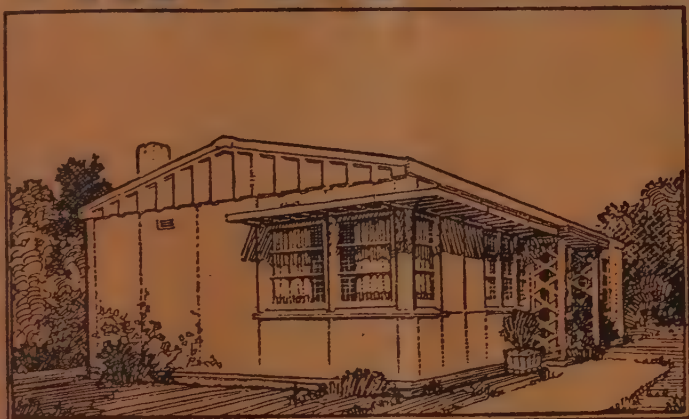
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Queensland News and Notes

(By Our Special Correspondent.)

North Queensland.

Marketing in the North has been badly disorganised with frequent floodings of the various rivers, particularly the Burdekin. At times, Townsville was cut off from Traffic from the South, North and West. Serious delays occurred with fruits and vegetables in transit to the North by rail from South Queensland, and in the movement in North Queensland and South of Northern products such as Bananas.

All through January the Cairns market was well supplied with good quality Beans from the Atherton Tableland and Julatten, with an actual oversupply in the middle of February.

Atherton and Mareeba also produced small quantities of Cabbage, which were suitable for the local trade, provided they went into consumption within a couple of days of harvesting. Softness is due to their being full of water and being produced under highly humid conditions.

Carrots, also, were marketed from the Atherton Tableland.

Banana deliveries reached glut proportions in Townsville and Cairns, despite substantial railings to South Queensland.

Early in February the first of the new Season's navels made their appearance on the Northern market.

With the hot weather conditions experienced throughout the State, and with frequent rail hold-ups on account of floods, heavy losses occurred with Stanthorpe Tomatoes consigned to Townsville and Cairns.

Proposed New Cannery.

Growers and business people of Home Hill and Ayr are very keen on the establishment of a cannery locally to concentrate on Pineapples, but to handle all tropical products. Arrangements were recently made for Pineapples grown at Ayr to be canned by the Gladstone meatworks, and reports are to the effect that the outcome was excellent.

An invitation has been extended by the Cane Growers' Council to the C.O.D. for members of the Executive and Staff to visit Ayr in April to discuss the canning project on the spot.

Central Queensland.

Reports have been received of heavy plantings of Papaws. Prices for this

fruit have been high on the fresh fruit markets and deliveries to canneries have fallen far short of requirements. There is room for expansion of the industry, but there is a definite danger of over-production, as Papaws can be brought into production quickly and there are big areas available for this crop in Central and South Queensland.

South Queensland.

The Stanthorpe crop has proved very heavy, and big deliveries of Apples, Tomatoes, Grapes, etc., have been made to all Queensland markets, to Sydney and Newcastle. The Tomato crop proved too heavy for Trade requirements, and very low rates ruled by the end of the third week in February. Quality and pack were very good.

It was originally thought that the Apple crop would be light, but actually it has proved heavy and not less than 450,000 cases are anticipated.

During the previous heavy crop, supplies of cases were allocated on an equitable basis amongst individual growers by a Committee set up under the D.W.A.C. This control, however, has lapsed, and numerous growers are finding it extremely difficult, and at times impossible, to secure sufficient cases for their normal marketing. Other growers, who had the foresight to lay in stocks, or who are more fortunately situated with millers or case distributors, have had sufficient.

Pineapples.

The 1946 Summer Crop is now well in its stride, approximately 25 per cent. of the estimated crop of 670,000 cases has already been harvested. Unfortunately, probably 20 per cent. of the crop has been badly affected with sun burn as a result of the extreme heat on 1st and 2nd February. Temperatures soared to 103 deg. causing a lot of the fruit to badly boil. This may reduce the estimate by 50,000 cases.

Fruit affected by sun burn can, in some instances, be used for Juice or Jam, but a large percentage is useless. It is a number of years since the industry has suffered from such extensive burn.

The voluntary diversion which commenced on January 22nd, is working satisfactorily. Canners have been able to staff their factories and no difficulty has been experienced in processing the available fruit. Not

only were canners able to get into their stride smoothly, but there was a uniformity in deliveries to all markets such as would be impossible without a diversion scheme.

Canners this year did not have the assistance of Man Power in securing female labour which is very difficult to obtain in Brisbane. An advertising campaign designed to attract women willing to work in the canneries for a few weeks proved successful. This was helped by the 75% male rate award. Further advertising will be necessary to secure additional labour required during the peak weeks which are expected from the 3rd week in February to the 3rd week in March.

Bananas.

Tentative figures supplied by the Banana Industry Protection Board, reveal that planting permits totalling approximately 1,500,000 plants have been applied for during the current planting season.

From these figures it is expected that the acreage under Bananas in Queensland will increase from approximately 10,000 acres to, in the vicinity of 13,000 acres, an increase of 33%. This increase together with the expected increase in N.S.W., will probably result in 1947 production being rather more than the Australian market can absorb at prices which will cover the cost of production.

This makes it imperative that Grower Organisations should give urgent consideration to some method of stimulating consumption. The B.S.G. Committee considers this can best be done by a general improvement in standards of ripening and that this could only be achieved by the

establishment of central ripening plants in each of the capital cities.

It is particularly noticeable during periods of heavy supply such as recently occurred on the Brisbane market, that ripening space is insufficient to handle the whole of the Bananas coming forward, with the result that much of the fruit is put on to the market in an unsatisfactory condition. This adversely affects the sale of the ripe fruit at the very time when heavy clearances are most needed. Sydney ripening rooms also proved inadequate recently to cope with Banana deliveries.

It is hoped that the first step in this direction will be taken when consideration is given to the construction of modern markets in Brisbane.

Brisbane experienced one of the worst gluts on record, commencing on January 26th. It was due to a combination of circumstances. For the first time in over 40 years, Brisbane temperature exceeded 100 deg. on two successive days. This telescoped about three weeks cutting into one and brought forward the later fruit thus extending the period of the glut. These increased loadings were accentuated by the arrival in Brisbane of approximately 1,000 cases weekly from areas coming into bearing in North Queensland. The market was badly upset by the holiday on Monday, January 28. With heavy supplies of Apples, Grapes, Pears and Tomatoes, the market had not recovered by late in February.

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GROWERS — Consign Your Fruit and Vegetables to Agents who are Members of N.S.W. Chamber of Fruit and Vegetable Industries

AMENDED LIST OF MEMBERS OF THE N.S.W. Chamber of Fruit and Vegetable Industries

TOGETHER WITH SHIPPING NUMBERS.

FRUIT SECTION.

Shipping No.		Shipping No.	
242	ALLEN, STAN.	149	MOORE & LLOYD.
76	ASSOCIATED GROWERS' SELLING AGENCY.	59	MOSS, A.
		111	MOSS, J. & SONS.
		18	MUSGROVE, W., & SON.
		77	N. & A. FRUIT & PRODUCE CO.
		73	PALMISANO BROS.
		114	PANTANO, S.
		777	PATERSON & CO. LTD.
		106	PAULL, W. J.
		160	PICONE, F.
		5	PRODUCERS' CO-OP. DIST. SOC. LTD.
		279	QUIGLEY, E.
		11	REEDY BROS.
		83	ROGERS, F. G. H.
		276	ROUGHLEY, O.
		7	SALMON, F. J., & CO. LTD.
		181	SAGGIN, P.
		60	SALTER BROS.
		96	SANDRIN, A.
		263	SCARAMUZZI, C.
		270	SCHUSTER, A. E.
		16	SHERRINGHAM & CO.
		37	SILK BROS. (INTERSTATE TRADERS) PTY. LTD.
		47	SINCLAIR, W. J.
		19	SLATER, J., PTY. LTD.
		100	SOUTHCOTT, W. H.
		162	SPURWAY, A. E.
		101	STANTON, E. T.
		180	STASSI, G., & CO.
		127	STEVENS, F. G., & SONS.
		43	SUN LEE & CO.
		55	SYDNEY BANANA CO.
		45	TERREY, A.
		70	TERREY, J.
		205	TRATHEN & HALL.
		140	TURNBULL, D. C.
		229	VALENTINE, R., & SONS.
		277	VINCE, L. L.
		145	WADDELL, A. W.
		195	WALKER, A. H., & SON.
		206	WALTERS, M., & CO.
		188	WARD & FELTON.
		2	WATKINS & EVANS.
		132	WILSON BROS.
		131	WILSON, H.
		146	WILSON & CROUCHER.
		29	WING CHONG & CO.
		22	WING ON & CO. LTD.
		21	WING SANG & CO. LTD.
		115	WING TIY & CO.
		281	WOODWARD, H. P.
		49	YICK, S., & CO.
		23	YOCKSUI BROS.

VEGETABLE SECTION.

Shipping No.		Shipping No.	
168	B.P.B. & CO.	113	MITCHELL, T. S.
76	BANANA GROWERS' DIST. LTD.	34	MITCHELL, S. B.
		90	MOLESWORTH, G. H.
		313	MOLTZEN, W.
		187	MONTGOMERY & SON.
		59	MOSS, A.
		111	MOSS, J., & SON.
		124	OVENS, F.
		244	PARKER, E. W., & SON.
		121	PETERS, S. A.
		5	PRODUCERS' CO-OP. DIST. SOC. LIMITED.
		272	RAINSFORD, T.
		53	RHODES, S. J.
		60	SALTER BROS.
		96	SANDRIN, A.
		37	SILK BROS. (INTERSTATE TRADERS) PTY. LTD.
		91	SMALL, E. A.
		100	SOUTHCOTT, W. H.
		127	STEVENS, F. G., & SONS.
		43	SUN LEE & CO.
		55	SYDNEY BANANA CO.
		81	TERRILL, R. A.
		150	THOMPSON & SMITH.
		50	TOMATO DISTRIBUTORS PTY. LTD.
		300	TONER, L. J.
		28	WADE, E. M.
			WATSON, R. B.
		1	WING BROS.
		22	WING ON & CO. LTD.
		21	WING SANG & CO. LTD.
		115	WING TIY & CO.
		333	WOODS, W. O.
		49	YICK, S., & CO.
		23	YOCKSUI BROS.

Fruit and Vegetable Trades Section

Contributed by the Commonwealth Chamber of Fruit and Vegetable Industries and its Constituent Members whose Names and List of all Members are Set Out in Advertisement.

The Commonwealth Chamber of Fruit and Vegetable Industries is responsible only for the matter appearing in the Fruit and Vegetable Trade Section of this Journal.

By arrangement with the proprietors of "The Fruit World," the Commonwealth Chamber will be providing articles in this space each month, while articles will also be contributed by the various State organizations. These will deal with matters of interest to the Fruit and Vegetable Industries, both in the Commonwealth and State spheres.

As President of the Commonwealth Chamber, I would like to take this opportunity of extending good wishes to all Fruit and Vegetable Growers throughout Australia and to assure all producers that the Commonwealth Chamber will do everything in its power, in the Federal sphere, to improve the general conditions of the Industry.

Our Industries have passed through five most difficult years and due to conditions brought about by the shortage of manpower, fertilisers, seed and all kinds of materials, there is urgent need for immediate improvement in many directions. It is the considered opinion of the Commonwealth Chamber that the time has arrived for the closest co-operation between the producing and distributing sections of the Industry and given that full co-operation there are no difficulties confronting the Industries that cannot be overcome. On behalf of the Commonwealth Chamber, I can assure producers that each State Chamber is willing and anxious to co-operate and assist in all matters that will tend to the improvement of the Fruit and Vegetable Industries.

There are already signs that prices of fruit and vegetables are commencing to come back rapidly and if the uneconomical values that often prevailed in pre-war times are to be prevented, it is essential that the two main elements of the Industry, namely the Producers and Distributors, should work in the closest harmony.

Y. F. JESSER, President.

CONFERENCE OF GROWERS AND DISTRIBUTORS.

The N.S.W. Chamber of Fruit and Vegetable Industries is calling an Industry Conference which will be held in the Assembly Room, 215a Thomas Street, Sydney, on Wednesday and Thursday, the 29th and 30th May, 1946.

Invitations have been extended to all Fruit and Vegetable Growers' Associations throughout New South Wales to attend. The purpose of the Conference is to bring about closer relations between producers and distributors and to jointly endeavour to overcome some of the present difficulties confronting the Industry. The response so far from both Fruit and Vegetable Growers' Organizations has been very satisfactory and it is hoped that, as a result of the Conference, united action will be possible on many matters.

All Organisations have been invited to submit items for the Agenda not later than the 23rd March and if received in time, these will be published in the April Issue of "The Fruit World," but if too late for that issue, will appear in May.

Criticism of Prices. For some time passed, the Sydney Press has been publishing quite an amount of hostile criticism of the prices of fruit and vegetables. Much of this criticism is irresponsible and based on prices taken only in certain districts or suburbs. As producers are well aware, the real reason for the higher values has been the shortage of supplies to the general public, due in the case of some varieties of both fruit and vegetables to the fact that large amounts were required for canning, or for distribution to all sections of the Defence Forces, both our own and our Allies, and in the case of other varieties to short crops, owing

CHAMBER OF FRUIT AND VEGETABLE INDUSTRIES IN WESTERN AUSTRALIA

Producers are invited to consign to any of the following Members of the above Chamber:—

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GILES AND RYAN, METROPOLITAN MARKETS, PERTH.
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Bulk lots for distribution to any of the above Members may be arranged for by communicating with the

SECRETARY OF THE CHAMBER, H. C. STEWART,

E.S. & A. Bank Chambers, St. George's Terrace, Perth. G.P.O. Box B 267.

Telegraphic Address: "Chamberfruit."

Telephones: B 5131, B 5132, B 8867.

DERMOTT, Gen. Secty., 215a Thomas St., Haymarket, Sydney.

to seasonal conditions or shortages of manpower, and in the case of Apples to lack of sufficient shipping from Tasmania to the mainland.

Prospects are that the position will improve in the immediate future and the consumer should be able to obtain both fruit and vegetables at reasonable prices. At the same time it is hoped that values will not go back to the pre-war days when many lines were sold to the consumer at less than the cost of production. Australian consumers have often in past years, obtained fruit and vegetables at below their true values and it is hoped that the Industries will be in a position to educate the consumer so that he will not expect to obtain fruit and vegetables at prices that are not payable to the producer.

P. S. MACDERMOTT,
General Secretary.

N.S.W. CHAMBER OF FRUIT AND VEGETABLE INDUSTRIES.

Another of the Chamber's Members has now returned and been discharged from the R.A.A.F. and will be re-opening his business in the Sydney Markets which he had closed down when he enlisted.

He is Mr. Allan Trathen and he has served over 3½ years with the R.A.A.F. He will be commencing as a Farm Produce Agent in the Fruit Section of the City Markets and will be trading under the original name of Trathen & Hall. The firm of Trathen & Hall is a very old-established one and is well and favourably known to fruitgrowers who consign to the Sydney Markets. Mr. Trathen took over the running of the business when

his father retired some years previous to the War and proved himself a capable and energetic salesman.

FRUIT AND VEGETABLE MARKETING CLASSES.

The Sydney Technical College has prepared a certificate course in Fruit and Vegetable Marketing to commence in 1946. The Chamber has taken a leading part in this and together with representatives from all Sections of the Fruit and Vegetable Industries, has assisted in drawing up the course.

Two subjects will be taught, viz.:—

- (a) Fruit and Vegetable Marketing (2½ hours per week).
- (b) Business Principles and Book-keeping as applied to the marketing of fruit and vegetables (3 hours per week).

The course may be completed in one year. Classes will probably be held in the evening.

It is considered that the course will be of considerable assistance to persons working in:—

- (a) the production of fruit and/or vegetables;
- (b) the wholesale marketing of fruit and/or vegetables;
- (c) the retail marketing of fruit and/or vegetables.

No educational standard required for admission. Through this course it is hoped that workers in the industry will be given the opportunity hitherto unavailable, of studying the technical and scientific aspects of their work and that this will result

Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the

Victorian Chamber of Fruit and Vegetable Industries

the following list is given. All are members of the above Association, and are registered firms carrying on business in the WHOLESALE FRUIT MARKET, MELBOURNE. (All Members under Fidelity Bond.)

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J. HYMAN & SON (51).	ALFRED MILLIS & SONS.
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FRANK BOOTH & SONS PTY. LTD. (16).	YEE TONG & CO.
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TIM YOUNG & CO. PTY. LTD. (18).	P. R. QUICK & SONS, 458 Queen Street.

Correspondence is invited by the Association.

OFFICE: 21 Wholesale Fruit Market, Queen St., Melbourne. PHONE: F 4866.

Calling All Fruitgrowers . . .

The Queensland Chamber of Fruit and Vegetable Industries Ltd.

Recommends Consignments being sent to any of the following Agents who are MEMBERS OF THE CHAMBER:

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W. ARKELL & SONS 12	MISS M. LLOYD 43
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T. S. BOWDEN & CO. 103	WM. MACKAY 20
A. J. CARTER 37	MARTIN & CO. 44
S. & W. CARTER 63	MENDOZA & WILLIAMS PTY. LTD. 40
R. CASEWELL 69	L. J. McCAUSLAND 90
A. E. CHAVE 4	McCOWAN & HAMMOND 34
CLARK & JESSER 14	McDOWALLS PTY. LTD. 101
COLLARD & MACKAY 2	MURRAY BROS. 22
COMINO BROS. PTY. LTD. 39	R. M. NEIL 105
P. ERIKSEN 79	A. NICHOLSON 71
EVANS & JONES 70	W. J. E. PASCOE 54
F. C. GESLER 93	H. PLINT 7
L. FRANZEN & SON 68	W. E. POTTER 98
HEDLEY GEEVES PTY. LTD. 6	ROBSONS PTY. LTD. 28
T. G. GOSS 51	SALISBURY & WILLIAMS 53
I. GUINSBERG 100	R. B. SELLARS 32
WM. GUTTORMSEN 42	H. STANTON & SON 21
JACKLYN & JACKLYN 36	STANTON BROS. 1
R. W. JOHNSTONE 85	H. THORPE & SONS 25
WM. JOHNSTON 64	J. E. TIPPER 5
JUSTINS & FINLAYSON 41	ROWELL & CONNERS 88
J. H. LEAVY 47	H. L. WOOL 74

ASSOCIATE MEMBERS: Con Caris, G. B. Morris, J. H. Lathouras, A. J. Sutherland, G. Venery, D. E. Good, Rockhampton; and J. W. Rex, Maryborough.

The Chamber is prepared to receive Consignments in Bulk lots for distribution to any of these Agents. No charge will be made to the Grower for this service.

Further particulars from the Secretary, E. B. P. BROOKS, Exchange Chambers, Turbot Street, Brisbane. Telegraphic Address: "Chamberfruit," B'ne.

The South Australian Chamber of Fruit & Vegetable Industries Incorporated

The following is a list of Members of the above Chamber:—

H. H. BAKER.	LINDQUIST & HARRIS.
BACHE BROS.	MURRAY FRUIT DEPOT.
BAKER & BROWN.	W. F. MAUSOLF.
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JOSEPH JOHNSON & CO.	F. W. VEAR PTY. LTD.
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H. H. & E. C. KEEN.	THE WHOLESALE FRUIT MERCHANTS OF ADELAIDE LTD.
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FRUIT AND VEGETABLE TRADE SECTION—Continued.

in greater efficiency throughout the industry generally.

Fees.	One Term.	Three Terms.
Fruit and Vegetable Marketing	20/-	50/-
Business Principles and Bookkeeping	10/-	25/-
Full Course	30/-	75/-

Persons under 21 years of age and earning less than 30/- per week will be charged half fees.

The N.S.W. Chamber of Fruit and Vegetable Industries.—

P. S. MACDERMOTT,
General Secretary.

ANNUAL PICNIC.

"The Second Annual Picnic of the Fruit and Vegetable Industries was held at National Park on Wednesday, 20th February.

It is estimated that over two thousand (2,000) people attended, representing the Wholesale Distributors, Growers, Retailers and Carters.

Alderman O'Dea, representing the Lord Mayor, addressed a few remarks over the loud speaker to the large gathering and was supported by Mr. W. Musgrove, representing the N.S.W. Chamber of Fruit and Vegetable Industries, and Mr. A. E. Tasler, representing the Vegetable Growers' Association of New South Wales.

Over Sixty-five pounds (£65) was donated as prize money for the large and varied sporting programme which was arranged and conducted very ably

by Mr. C. Miller and his hard-working Sub-Committee.

The Honorary Secretary of the Committee was Mr. P. S. Macdermott, General Secretary of the N.S.W. Chamber of Fruit and Vegetable Industries who is to be complimented on an excellent job of the administrative side, while the Committee, arranged by Mr. F. L. Davidson of the N.S.W. Shopkeepers' Association, put in some good work in distributing sweets, milk, etc., throughout the day."

PERSONAL.

Mr. Geoff. Pogson is also back in harness again, after some three (3) years' service with the A.I.F., and Mr. S. Pogson is now able to take a well-earned rest.

BRISBANE MARKET AND MONDAY HOLIDAYS.

The question of whether the Brisbane Markets should open on Monday holidays has again come to the fore.

It is the general practice in Queensland for all public holidays other than Xmas holidays and Anzac Day, to be observed irrespective of their actual dates, on Mondays, thus giving workers a longer week-end, and it has been the practice of the Markets to observe these holidays.

The C.O.D. however have now started an agitation to have the Markets opened on all Monday holidays which has been strongly opposed

by the Trade. The agitation of the C.O.D. started in April last year and they have been keeping up the pressure ever since.

A Ballot taken some months ago amongst all Sections of the Trade clearly indicated that the Trade wanted the holidays.

The C.O.D. are again strongly pressing the matter and stated that "indescribable congestion" prevailed after the last Foundation Day Holiday. Agents generally did not agree that this was the case, and agree that the reasons against opening are quite as strong as those in favour of opening, and as the Trade does not desire it, nor do Employees either, the position remains as it is.

Agents contend that the rush buying after a Holiday brings better prices, and that as a consequence the

observance of a Holiday is not in any way detrimental to Growers.

The Queensland Chamber of Fruit and Vegetable Industries Limited.—E. Brooks, Secretary.

SELLING UNRIPE APPLES.

It was recently noted that Delicious apples were being sold in Sydney shops before the end of February. They were not ripe, and the people who bought them will be disappointed. Jonathans have been on sale in Melbourne from mid-February.

These were not ripe. It is a mistake for practices such as these to continue. The public become dissatisfied and the industry suffers.

There is a maturity test below which it is an offence to sell oranges. Apple growers take notice.

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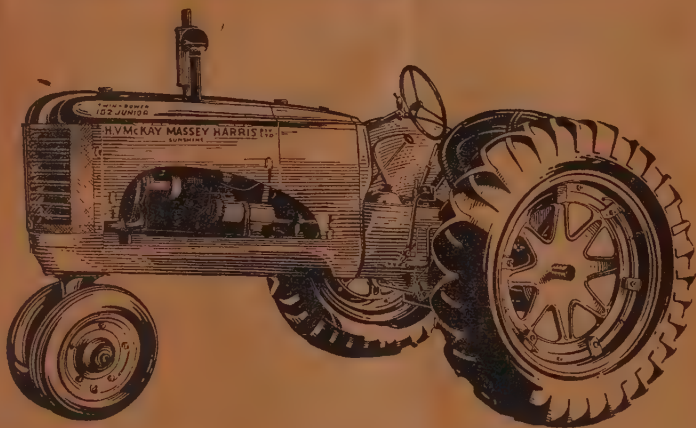
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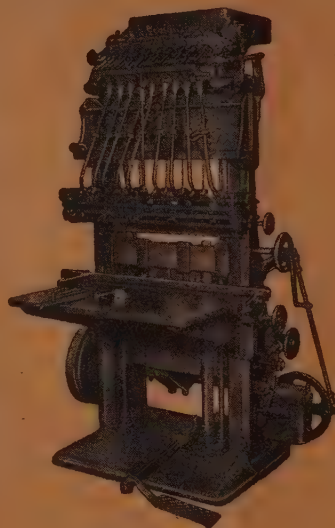
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WAR AGRICULTURAL COMMITTEES.

Applications for Materials, Etc.

The Victorian Minister of Agriculture, Mr. W. G. McKenzie, announced that, as from 1st March, War Agricultural Committees would cease to sponsor applications previously handled by them for the undermentioned materials, services or machinery. After the date mentioned the procedure would be as follows:—Applications for new tractors and tractor tyres to be forwarded direct to the Machinery Officer, Department of Agriculture, 1 Collins Place, Melbourne; applications for machinery under the Machinery Group-Hire Purchase Plan to be submitted direct to the Machinery Officer, Department of Agriculture, 1 Collins Place, Melbourne; applications for cement sheets to be lodged with retailers who will forward them to wholesalers without reference to War Agricultural Committees; applications for Building permits to be forwarded direct as formerly to the State Building Directorate, Invicta House, 232 Flinders Lane, Melbourne; electricity installations are handled by the State Electricity Commission or its Branch Manager without reference to War Agricultural Committees. The materials Directorate have advised that it will be no longer necessary for applicants for fencing wire, wire-netting and bailing wire to complete W.1. forms requiring War Agricultural Committees' sponsorship as from 1st March and applicants therefore should apply direct to their retailers.

Controls already lifted from other materials with which War Agricultural Committees were concerned are, agricultural machinery, other than new tractors, ammunition, welding gases and steel posts.

EFFECT OF LIME ON THE SOIL.

By the application of lime, a soil is supplied with the element calcium, without which the great majority of plants cannot grow. The effect of liming is beneficial in the following ways:—

1. It neutralises or reduces soil acidity. This is perhaps the most important action of lime on soils, for, when excessive acidity has been removed, lime can exert other beneficial effects. (There is no foundation for the belief that exposure of acid soils to the atmosphere removes soil acidity. Soil acidity is caused by the removal of bases such as lime from the soil, and can be remedied or reduced only by the addition of liming materials.)

2. It improves the texture of heavy acid soils by causing the formation of a granular structure. Drainage goes on more readily, aeration is improved, and the soil is easier to work.

3. The removal or reduction of acidity encourages the growth of beneficial soil organisms, especially those which convert the nitrogen in soil organic matter into a form which can be used by plants.

A pamphlet on the subject of lime in relation to agriculture is obtainable free on application to the Division of Information and Extension Services, Department of Agriculture, Box 36a, G.P.O., Sydney.

PEA-VINE SILAGE.

Large areas of Peas are now grown for canning and with modern machinery. The green Peas are mown in the field and carted direct to the canning factories, where they are vined. The haulms and empty pods are then available for feeding direct to dairy cows, other cattle and sheep, as pea-vines or for conversion to pea-vine silage.

Mr. A. C. T. Howitt, Live Stock Science Officer of the Victorian Department of Agriculture, points out that, when properly made, pea-vine

silage has twice the food value of sugar-beet pulp silage. It is an extremely valuable fodder for supplying protein and other nutrients to dairy cows, being equal in food value to good, mixed pasture silage.

Pea-vine silage is said to have a strong odour, nevertheless it is relished by all classes of cattle and sheep. It is not desirable to feed the silage in the cow shed, but, if fed to milking cows in the paddock immediately after milking, it should not taint the milk — an important factor where whole milk is sold direct for human consumption.

The silage can be made in the same way as sugar-beet pulp or other silage, but the green material would be collected at the canning factory.

Where the older method of lifting the pea plants, roots and all out of the ground, is practised, dirt adheres to the roots, making a gritty, less palatable fodder. Digestive troubles may occur in stock consuming vines or silage gathered in this way, therefore factory owners and farmers contracting to take the vines from the factories should discard earthy samples.



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NEW SOUTH WALES.

Sydney, 27/2/46.

The State Marketing Bureau reports:

Fruit.

Supplies of Apples continued to increase. Consignments from Queensland, Victoria and South Australia were included, while a fresh shipment of Tasmanian Worcester Pearmain and Alfriston varieties was received. Demand for choice coloured Jonathan, Delicious and McIntosh Red, of large sizes, was satisfactory, up to 25/- per bushel being paid and, in a few instances, more. Rates for Queensland supplies were easier at 8/- to 18/-, occasional specials 20/-. Victorian Jonathans sold from 12/- to 22/-. Request for the Tasmanian fruit was quiet, and values of Worcester Pearmain were 9/- to 14/-. Rates showed a downward trend at closing.

Williams Pears from orchards in this State, and Victoria, met a steady inquiry with values showing a firmer trend, late in the period, for large sizes of choice green fruit.

Choice J. H. Hale Peaches from inland districts, continued to sell well at 14/- to 18/- per half case. Other varieties showed much variation in quality and the price range was wide at from 6/- to 12/-, with some inferior lots lower.

Ruling rates were:—

Apples: Dessert—N.S.W. 10/- to 20/-, selected Jonathan, McIntosh Red and Delicious to 25/-; Victorian 12/- to 18/-, few higher; Queensland 8/- to 18/-, few higher; Tasmanian 8/- to 12/-; cooking, 6/- to 15/-, few higher, small and inferior lines of all varieties lower. Pears: Williams 10/- to 14/-, few higher, ripe lines lower. Oranges: 2nd crop Valencia 6/- to 15/-, occasional sale to 20/-. Lemons:

Selected counts 20/- to 25/-, very small sizes from 10/-, plain grades from 12/- per bushel case. Passionfruit, 15/- to 35/-, few 40/-, inferior lower. Peaches, 6/- to 18/-. Plums, 4/6 to 14/-. Nectarines, 8/- to 16/-. Grapes: Black Muscat, large 14/- to 25/-, small 7/- to 10/-; White Muscat 15/- to 25/-; other white varieties 5/- to 10/-, specials 12/-, per half case. Bananas, 20/- to 45/-, inferior lower. Pineapples, 14/- to 21/3 per tropical case. Cantaloupes, 4/- to 12/-, inferior lower, per crate. Watermelons, 4/- to 7/-, few higher, per cwt.

VICTORIA.

Melbourne, 4/3/46.

Vegetables.

Beans, French, 10/- to 25/- 50 lb., few to 30/-; Beetroot, to 1/- doz. (max. 14/- cwt.); Beet, Silver, 4/- to 6/- doz. bnchs.; Cabbages, 6/- to 10/- doz.; Carrots, 3/- to 4/- doz. bnchs., max. 21/- cwt. without tops, 16/- cwt. with tops; Celery, 6/- to 8/- doz. bnchs.; Cucumbers, 2/- to 3/- doz.; Garlic, 9d. to 1/- lb.; Horseradish, 1/- to 1/3 bundle; Lettuce, 10/- to 16/- case; Mint, 2/- to 3/- doz. bnchs.; Melons, Citron, 6/- to 18/- doz.; do., Water, 10/- to 24/- doz.; Mushrooms, 20/- to 40/- case; Onions, dried, 5/- to 6/6 case; do., green, 2/- to 3/- doz. bnchs.; Parsley, 2/- to 3/- doz. bnchs.; Parsnips, 3/- to 4/- doz. bnchs., max. 23/- cwt. without tops; Peas, 12/- to 20/- 50 lb., few to 26/-; Potatoes, 10/6 to 11/- bag; Pumpkins, 8/- to 24/- doz.; Radish, 1/6 to 2/6 doz. bnchs.; Rhubarb, 3/- to 4/- doz. bnchs.; Spinach, 6/- to 8/- doz. bnchs.; Tomatoes, 8/- to 20/- case, few to 25/-; Turnips, 2/8 to 3/6 doz. bnchs.; do., Swede, 12/- to 13/- bag, do. 4/- to 4/6 doz. bnchs.; Vegetable Marrows, 3/- to 6/- doz.

Fruit

(Bushel case, unless stated).

Apples, eating, 6/- to 14/-; do., cooking, 4/- to 8/-. Grapes, Sultanas 10/- to 14/-, Raisin de Dames 10/- to 16/-, Walthams 12/- to 25/-, few to 28/-, Muscatels 12/- to 25/-. Oranges, Navel and Valencias, to 20/6 (max.). Lemons, 18/- to 25/-, max. 25/-. Raspberries, 1/- to 1/3 punnet; Strawberries, 2/- to 3/- punnet. Nectarines, 15/- to 25/-. Peaches, 10/- to 20/-, few to 25/-. Pears, dessert, 6/- to 14/-; Packhams, to 22/-. Papaws, 20/- to 30/- double case. Plums, 6/- to 12/-. Quinces, 6/- to 8/-. Bananas, 4d. to 6½d. lb. Pineapples, 20/- to 23/9 double case. Passionfruit, 15/- to 25/- half case. Cantaloupes, 5/- to 10/-, few to 12/-.

SOUTH AUSTRALIA.

Adelaide (4/3/46).

Prices ruling and yesterday's East End Markets, supplied by S.A. Fruit-growers' and Market Gardeners' Association.

The quality of Peas was much improved with firmer prices. Heavy supplies of Tomatoes were offered on a quiet market. Beans sold freely. Most lines of bunch vegetables were well picked up. There was a good demand for Pears. Nectarines and Peaches were well sought after. The undermentioned quotations are for F.A.Q., cases extra except where stated.

Vegetables.

Beans (French), 7/- to 8/- doz. lb.; Beetroot, 3/- doz. bnchs.; Cabbages, large 12/- doz., medium 9/-, small 6/-; Carrots, 3/- doz. bnchs.; Celery, 6/3 doz. heads; Cucumbers, green up to 2/- doz., (Apple) up to 2/-; Lettuces, 3/- doz.; Onions, picklers 18/- cwt., white 14/- to 16/-; Parsnips, 4/- doz.

bnchs.; Peas, 20/- to 24/- bushel; Potatoes, 8/1½ cwt.; Rhubarb (Cherry), 2/- doz. lb.; Tomatoes: Firsts, 8/- ½ case, inferior lower; Trombones, 14/- cwt.; Turnips, 3/- doz. bnchs.; Swede, 4/- doz. bnchs.; Triambles, 12/- cwt.

Fruits.

Apples: Del. 12/-, Jon. 10/-, cookers 7/- case. Pears: Duchess 15/-, Packham 16/- case. Nectarines, 8/- case. Peaches: White 10/-, Yellow 9/- ½ case. Plums: Table, dark 8/- ½ case, Prunes 5/-. Figs: Sugar 5/- to 6/- ½ case. Quinces, 3/6 to 4/- ½ case. Blackberries, 6/- to 7/- doz. lb. Grapes: Dark 8/6 ½ case, White 8/6. Bananas: Ripe 6½d. per lb. Pineapples, 5½d. per lb. Passionfruit to 2/- doz. Melons: Pie 9/4 cwt., Sweet 24/- to 28/-, Water 14/- to 16/-.

Cases and containers are extra to the above prices.

QUEENSLAND.

Brisbane (26/2/46).

It is noticeable for the first time since 1941 that the market is reacting to the supply position as in pre-war years.

Jonathans from the Stanthorpe district have been arriving and values towards the end of February have fallen sharply compared with the beginning of the month, this variety, together with Delicious, comprising a large percentage of Stanthorpe dessert varieties.

Quality generally has been good, and with the exception of small and faulty fruit, the market has been maintained from 10/- to 15/- over the last fortnight.

Substantial quantities of Granny Smiths have been marketed as cooking Apples, but the demand is weak, especially for small and inferior.

The Pear market remains steady, supplies being from Victoria and New South Wales, with the exception of a small quantity at the beginning of the month.

Stone fruit from the Stanthorpe district is practically finished, but substantial supplies of Plums and small quantities of Peaches and Nectarines have been arriving from New South Wales.

The market is well supplied with Stanthorpe Grapes of high quality.

Pineapples and Bananas are in heavier supply and choice lines are selling freely, with inferior slow.

Choice vegetables continue to sell well, but no demand exists for inferior.

The very hot weather accompanied by rain and floods has caused some loss to the industry, and it is hoped that March will be a cooler month.

Prices.

Apples: Dessert, ½ and over, 9/- to 15/- per bus.; G.S., ½ and over, 9/- to 14/-, ½ to 3, 7/- to 10/-. Pears: Vic. W.B.C., 12/- to 17/-; Ripe, 6/- to 10/-. Plums: N.S.W., 8/- to 16/- per half bushel; soft and over-ripe, 3/- to 5/-. Pineapples: 8/- to 12/- per 1½ bus. case. Papaws: 20/- to 30/- per 1½ bus. case. Lemons: 15/- to 25/- per bus. case. Bananas: Cavendish, 1d. to 5d. per lb.; Lady Fingers, 1d. to 6d. per lb. Grapes: Muscats, 8/- to 12/- per half bushel; Waltham, 14/- to 18/-.

Tomatoes, choice, 3/- to 7/- per half bushel. Beans, 3d. to 8d. per lb. Peas, 5d. to 1/- per lb. Cabbage, 10/- to 25/- per chaff bag. Carrots, 16/- to 28/- per cwt.



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Science in Horticulture

NEW DEVELOPMENTS OF WORLD-WIDE INTEREST.

BACTERICIDES OF PLANT ORIGIN — APRICOT ROOTSTOCKS — CONTROL OF APPLE FIRE BLIGHT — IRON AND MANGANESE IN PLANT NUTRITION — BLACKBERRY ERADICATION — CONTROL OF RED SPIDER — MANURES AND RESISTANCE TO COLD — INCREASING CHERRY YIELDS — ZINC TREATMENT FOR "LITTLE LEAF" — POTATO CROWNS FOR PROPAGATION.

NEW DEVELOPMENTS in all phases of horticulture are regularly issued by the Imperial Bureau of Horticulture, E. Malling, England. These are in the form of horticultural extracts, being summaries of scientific tests from all parts of the world. It is of interest to note that some of the finest horticultural research is reported from the Soviet Union. Here are some of these exhibits:

Bactericides of Plant Origin. (Russian.)

In this book the author describes his investigations into the bactericidal substances discovered by him in Onion, garlic, radish, mustard seed, the leaves of citrus species, bird Cherry and in the roots of a wild paeony. He has not been able to identify their chemical composition, but he does not consider them to be ethereal oils.

As regards their action it was found that mixed Onions or Garlic were able within a few minutes to destroy cultures of streptococci, staphylococci, bacteria of typhoid fever and the very resistant strain BCG of tuberculosis.

The substances also destroyed fungi, protozoa, and the eggs of molluscs. Apart from the promising usefulness of these substances in medicine and in the destruction of microorganisms, their presence is an interesting biological phenomenon, for it may account for the mutual protection which the wild plants in a mixed vegetation seems to afford; disease is never so prevalent among such plants as among those under cultivation.

The author observed, for example, that when hemp and Potatoes were grown together, the Potatoes were never affected by *Phytophthora*.

Such protective substances, therefore, emanate from the whole and living plant, and do not require to be liberated by preliminary maceration of the tissues. When a branch of bird-Cherry and water containing protozoa were both put under a glass bell-jar, within 10 to 15 minutes the protozoa were killed. — B. Tokin, in "Nature" (U.S.S.R.).

Longevity in Apricots as Affected by Rootstocks.

The short life of so many Apricot trees caused the author to make a survey of reputedly old and well-cropping trees in Germany, details of which are reported. Apart from the effect of the locality, the rootstock was found to exert a great influence on the longevity of the tree. The following conclusions as to the suitability of rootstocks under specified conditions were reached: (1) In a warm and dry climate on permeable soils Apricot seedlings — particularly those derived from small-fruited trees, according to experienced growers — have proved most suitable. Vegetative propagation of selected clones was shown to be practicable. (2) In a somewhat moist and cool locality

and on less permeable soils long-lived trees were produced by working on Hauszwetschke and on seedlings of two local types. Clones of these rootstocks are now being obtained by earthing up.

No opinion can be formed yet on such rootstocks as common Plum, etc., since these have not been on the market long enough. (3) Cherry Plum seedlings (*Prunus cerasifera* var. *myrobalana* and var. *atropurpurea*, syn. *P. pissardi*) have given such bad results that their further use in Germany is strongly deprecated. (4) Sloe (*Prunus spinosa*) has not proved its worth yet and caution seems necessary. A selection of clonal types might provide valuable material for dwarfing rootstocks. (5) Almonds should be used only in sufficiently warm localities with permeable soil. Clonal propagation seems practicable. (6) In general, grafting should be given preference to budding. Especially in the case of hard-wooded Plum types the rootstock should be used to form the stem, since it is less susceptible to mechanical and frost injury. Intermediate stem builders have not been a success with Apricots. — F. Passeker (German).

Control of Fire Blight in Apple With Emphasis on Preventive Measures.

An account is given of control of fireblight canker (*Erwinia amylovora*) in Apples in New York. Canker removal during dormancy of the tree is a simple matter of tree surgery and is not described. Data based on a single comparative study of several chemical paints and the acetylene torch treatment on the very susceptible Tompkins County King Apple during the growing season show that 100 per cent. control was obtained with zinc chloride 43 per cent., cobalt nitrate, cadmium sulphate and the acetylene torch. Zinc chloride resulted in considerable bark injury, with the others bark injury was but slight. The acetylene torch was effective but lacks an inexpensive heating tool.

The blossom blight phase can be controlled (1) by spraying or dusting in bloom, (2) by handpicking of blossoms, or (3) by the use of a pollenicide timed to prevent fertilization and fruit set of the earlier blossoms on the truss. The control of sucking insects such as aphids will not injure the tree and has shown more promise than spraying the tree with bactericides. Three cases are cited of growers who have eliminated both phases by a systematic routine of canker painting and of blossom spraying with a bactericide and an aphid spray when the population began to build up. The time taken to clear the orchard of disease was one to two years. — E. M. Hildebrand, Annual Review Quebec Pomological and Fruitgrowers' Society.

Iron and Manganese in Plant Nutrition.

The importance of a correct iron-manganese balance was demonstrated

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in water culture experiments with Cape Gooseberry (*Physalis peruviana*) and Strawberry conducted at the Western Fruit Research Institute, Stellenbosch. It was shown that plants remain healthy at widely different levels of iron and manganese, provided they are supplied in a certain ratio to one another, the optimum being approximately two parts iron to one part manganese. Deviations from the effective balance will result in the reduction of dry weight or, in a more severe case, in chlorosis. The effective balance at which deficiency symptoms will not appear was narrower in the case of Strawberries than in the case of Cape Gooseberries. The concentrations of iron and manganese, at which various degrees of chlorosis occur, are indicated in tables and the leaf symptoms are illustrated by diagrams and photographs. — H. L. Pearse, "Farming," S. Africa.

Blackberry Eradication.

Blackberries were effectively destroyed by rolling down the stems with a tractor, cutting them by discing and burning the area after the shoot lengths had died out. Regrowth was six years, the Blackberry has not re-established itself the success may be regarded as a permanent one. Another area which had a similar treatment, excluding the grazing of sheep, was soon overrun again. — C. Walker, N.Z. Jour. Agric.

Control of Red Spider Mites.

Experiments carried out at the laboratory of Pest Control Ltd. have demonstrated the value of dusts con-

taining 1 per cent. of 2:4 dinitro-6-cyclohexyphenol as the dicyclohexylamine salt against red spider (*Tetranychus telarius*) on hops and greenhouse Tomatoes in Great Britain. The compound is widely used in U.S.A. against tetranychid mites. Preliminary experiments with *Oligonychus ulmi* on Damsons show promising results. Tables of results at various strengths are given. — A. C. Simpson, "Nature."

The Influence of Potassic and Phosphatic Manures on the Resistance of Spring Crops to Cold. (Russian.)

The manures, applied either in the ordinary way or in solution to seedlings, rendered Beans (*Phaseolus* sp.), lentils, Soya Beans, Peas, Camelina sativa, Millet, Sorghum, Buckwheat, Tomatoes, Cucumbers, Wheat, and Watermelon resistant to cold. — V. V. Ivanov, Sovetsk, Botan.

Increasing the Yield of Cherries.

Various oil emulsions consisting of vegetable oil, paraffin wax, bentonite and an emulsifying agent have been evolved since 1938 at the Michigan Experiment Station, the object being the production of substances that can be applied as sprays during the growing season, that are non-toxic to foliage and will reduce transpiration.

One of these emulsions used on Montmorency Cherries at a time of low humidity and short rainfall considerably increased size and therefore yield of Cherries. These emulsions are also effective on other fruit trees if added.

treated with spray containing emulsion are found to bear twice as much insecticide and fungicide per unit area as those receiving the sprays without emulsion. Certain risks connected with the use of emulsions seem to be marked increase of sulphur injury on Apple foliage and of copper on Cherry foliage, possibly because of the increased sticking effect, thus more dilute or less frequent applications of fungicide when used with emulsion are indicated.—V. R. Gardner, Proceedings Washington State Hort. Assoc.

Zinc Treatment for the Control of Rosette or Little Leaf of Fruit Trees.

Rosette of fruit trees in U.S.A. is a zinc deficiency disease, though there are other contributing factors which are not wholly understood. Sometimes the zinc content of affected trees is not lower and may even be higher than normal trees, but the application of zinc usually brings about a recovery. Excess phosphorus is often associated with zinc deficiency, i.e., if the trees

affected counts 20/- to more than is needed sizes from 10/- to 20/- per bushel.

For severe cases, a dormant spray at a concentration of 25 to 50 lb. zinc sulphate per 100 gal. water is recommended, for mild rosette the concentration can be 15 lb. per 100 gal. Another treatment is zinc oxide or basic zinc sulphate 4 or 5 lb. per 100 gal. added to the usual delayed dormant oil spray. Zinc in these forms is only effective when dissolved in oil. Good results have been obtained at Wenatchee on Pears and early Apples by spraying with 4 to 5 lb. of zinc sulphate per 100 gal. water in September after the fruit has been picked.—R. C. Lindner and W. A. Luce, Washington State Hort. Association.

Using Potato Crowns for Propagation.

The general conclusion is that propagation by means of Potato crowns cut in autumn from large tubers and stored in earth is at least as successful as propagation by means of whole tubers. The conditions necessary for

obtaining the requisite corky layer on the cut pieces are a temperature of 15 deg. to 18 deg. C. and adequate aeration and moisture during the first 10 to 15 days after cutting. — I. Glusenko (Lenin Academy of Science).

THE CABBAGE MOTH AND THE CABBAGE BUTTERFLY.

As plantings of Cauliflowers and Brussels Sprouts have commenced, growers are advised by biologists of the Victorian Department of Agriculture to take every precaution against these pests right from the commencement. Once these insects have become established it will become almost impossible to produce an insect-free crop.

The White Cabbage butterfly is a conspicuous day-flying insect, whereas the Cabbage Moth is a small, grey, night-flying insect, observed only when the crop is disturbed.

Treatment should be commenced as soon as the young plants are established after planting out, and continued at regular intervals, not exceeding ten days.

Dusting is recommended. A satisfactory dust is one containing 50 per cent. of lead arsenate. This dust is purchasable in the prepared form, or may be mixed by the grower using equal parts of lead arsenate and a filler such as kaolin, talc or hydrate of lime.

With Brussels Sprouts, the dust should be directed chiefly against the young sprouts forming up the stem, because once the grubs are allowed entry into the small sprouts, it is not possible to reach them. Sprouts treated in this way should be well washed prior to use. With Cauliflowers, once the heart or "curd" has commenced to form derris dust is preferable to lead arsenate. This dust is again available and is the best material to use on Cauliflowers because it is non-poisonous to human beings and will control both caterpillars and aphids.

GREEN FEED FOR POULTRY.

GREEN FEED is a most important item in the diet of poultry and no effort should be spared to provide a continuous supply throughout the year, points out Mr. E. Hadlington, Poultry Expert of the N.S.W. Department of Agriculture. Apart from its value in maintaining the health of the birds, an adequate supply assists in improving the yolk colour and adds variety to the diet.

Lucerne is, of course, the most satisfactory crop, not only from the point of view of food value, but also of permanence of supply. A "stand" of lucerne grown in drills and watered by an overhead spray will, with reasonable attention, last for five to seven years. Thus, this crop should receive first preference, but as it does not grow profusely in the winter months, it is advisable to grow other crops to keep up the supply during the winter. For this purpose, one of the best crops is Berseem clover, which will grow readily in the cold weather and provide several cuts up to the end of October. The best month for sowing this crop is February, and it can be sown either broadcast or in drills.

Other suitable crops which may be sown in February are Barley, Rape, and Silver Beet, and in March Barley, Oats, Wheat, Rape, Silver Beet and Wong Bok.

April is the best month for sowing Lucerne, but when the weather is favourable and the ground is thoroughly prepared, it can also be sown in March. Other suitable crops for planting in April are Oats, Barley, Silver Beet, Wong Bok and Red Clover.

Any of the crops, such as Berseem Clover, Barley, Rape, Silver Beet, Oats, Wheat and Wong Bok, will provide a fairly good supply during the winter, but Berseem Clover can be cut more frequently and will last longer than most of the others.

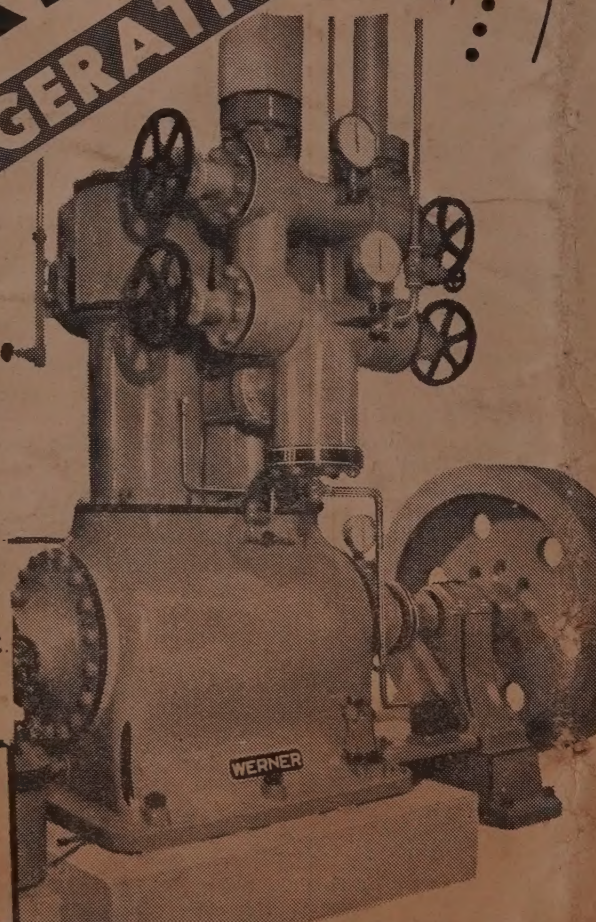
If the ground is not thoroughly clean, the weeds and grass come up with the crop and choke it before it is properly established.

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